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ONTARIO

36th ANNUAL REPORT

OF

Superintendent Neglected and Dependent Children of Ontario

DEALING WITH

Children's Protection Act
Children of Unmarried Parents Act
Adoption Act
Industrial Schools

UNDER THE DIRECTION OF THE PROVINCIAL SECRETARY
Head Office—1 Queen's Park Crescent, Toronto

Toronto, March 18th, 1930.

TO HIS HONOUR WILLIAM D. ROSS,
Lieutenant-Governor of the Province of Ontario.

MAY IT PLEASE YOUR HONOUR:

The undersigned has the honour to present to your Honour the Thirty-sixth Annual Report under The Children's Protection Act of Ontario, the Ninth Annual Report under The Adoption Act, and the Ninth Annual Report under The Children of Unmarried Parents' Act.

Respectfully submitted,

L. GOLDIE,
Provincial Secretary.

Toronto, March 16th, 1930.

HONOURABLE LINCOLN GOLDIE,
Provincial Secretary,
Parliament Buildings, Toronto.

SIR,—

I have the honour to transmit herewith the Thirty-sixth Annual Report under The Children's Protection Act of Ontario, and the Annual Reports under The Adoption Act, and the Children of Unmarried Parents' Act.

I have the honour to be, Sir,

Your obedient servant,

J. J. KELSO,
Superintendent and Provincial Officer.

ONTARIO

THIRTY-SIXTH REPORT

TORONTO,
March 4th, 1930.

WHAT new story can we tell about this great work for children that goes on from year to year with unceasing vigilance and that continues to bring protection and blessing to thousands of young lives! Time, like an ever-flowing stream, carries on our former wards to manhood and womanhood. We mark the record "Supervision Ceased" and turn to devote our attention to the oncoming generation suffering from the same social complications and only differing slightly in detail from the thousands of cases that have already occupied attention. How is it that we have not cleaned up all these social maladjustments long ago, so that we might have a brief spell of millenial rest! Alas, life is, and must always be, a conflict between good and evil—no sooner is one reform secured than the trouble breaks out in a new place, or in a different dress. To stop would mean submersion—we must keep up the struggle—knowing that while complete prevention of grievous wrong is our goal, we may still be victorious if we but keep in check the evils that unchecked would destroy our civilization. That we are to-day doing a larger and better child-welfare work than ever before in the history of the world, can be unhesitatingly affirmed. More money expended, more workers employed, greater efficiency, more intelligent understanding of the problems involved, closer co-operation, more popular and widespread social service,—in fact, most commendable advance in every line of christian, social philanthropy. There have been several outstanding cases of severity and brutality toward little children, but they were exceptional and the publicity and unanimous condemnation they received was a clear indication of the strong public sentiment that exists. The rights of children are safeguarded; their health conserved by a great army of doctors and nurses, and their comfort and happiness given first consideration in the councils of our public and governing organizations. The spirit of the age seems to accord to young people a degree of freedom and self-expression that is a complete departure from old-fashioned discipline and repression. With this freedom, however, there is co-related a development of knowledge and character that supplies what was formerly lacking in them—an ability to take care of themselves in circumstances of difficulty and temptation. We do not despair or deplore the changing conditions, realizing that individual life as well as our civilization, is a steady and constant evolution and that ultimately only the good and the best will prevail. Assuredly the progress is upward and in this general testimony we naturally include the activities of our Children's Aid Societies and the kindred movements that have taken their inspiration from this fundamental work for our boys and girls.

PROVINCE-WIDE ORGANIZATION

In Ontario there are many districts where much remains to be done toward Social amelioration. but some effort has been made to cope with the need. The Children's Aid system covers the entire Province and this uniform and co-operative plan is in itself unique. Outside of many individual workers and correspondents there are fifty-eight Children's Aid Societies actively engaged in work for the protection of children, with all the social up-lift that such work implies. Further, there is the important fact that all this work centres in a head office in the government building at Toronto to which the people everywhere in the Province are not only invited, but urged to report any cases of child-neglect so that proper steps may be taken to bring about improvement. No matter what the complaint is or how far distant it may be, action is at once taken and the case is not lost sight of until there is decided improvement. Through co-operation many families are warned, encouraged or put in the way of timely assistance; immoral and vicious conditions are broken up; children are removed to a new environment, when that is evidently the best thing to do, and at all places touched upon, the agent or inspector endeavours to interest influential residents in child-protection work, supplying literature and requesting assistance in the advancement of the social status of the people and the creation of new conditions of moral wholesomeness and material prosperity.

SURVEY OF FUTURE CITIZENSHIP

It has been said that if one wishes to know whether a country will be prosperous and successful fifty years hence, the best plan is to observe what is being done by way of training and educating children; whether conditions are favourable for the normal boy and girl to grow up healthy, strong and reliant, and able to think out problems for themselves, with a wide outlook, and firm purpose of life. If that be true, then there need be little fear for the future of this Province and if the thought be applied to the handicapped children who have come under the protection of the Children's Aid organization, then we can say with confidence that our labour has not been in vain, and our country is and will reap material benefit. Children living under unfavourable conditions with no future prospect have been made wards, trained and educated along the lines of good citizenship. Nearly thirty thousand of these children have been thus cared for. From the time the child became a ward of the Society until supervision ceased, every effort has been made to instill in the mind of the child that the future of the Province was dependent upon his actions. The great majority of these, taken from sordid surroundings and placed in foster homes, have become useful and industrious citizens.

FREEDOM OF ACTION

The various branches of the Children's Aid Society are given absolute independence of action in all that pertains to the welfare of children. They can initiate and carry on any line of activity for the betterment of child life and are in fact encouraged and expected to show all due zeal and enthusiasm in advancing the best interests of the work in their own locality. What they have done in past years has been simply marvellous, especially in awakening and sustaining popular interest in the cause of the needy child. The mere existence of the Society has in itself been a bulwark of protection and when one thinks of official boards comprising nearly two thousand prominent, influential, socially-minded citizens, the full value of the organization can be readily understood.

CHILDREN MADE WARDS

To provide an adequate check on the committal of children as wards of the Society, the Children's Protection Act provides that the Judge's Order, together with the evidence, should be transmitted to the Provincial Superintendent. These committals are carefully considered and local superintendents are advised concerning them.

During the past year there were 1,020 children made Wards—permanent 693: temporary 327.

A comparative statement of children made permanent wards from 1925 to 1929 inclusive is as follows:

Made wards in 1925	977
" " " 1926	809
" " " 1927	686
" " " 1928	706
" " " 1929	693

Average per year—774.

The above figures show that there is still a large number of children in Ontario who are not being properly influenced by training or example and this condition is seemingly worse in the larger centres of population. In fact the chief cure we have for the average neglected child is to transfer him from an urban to a rural district. The Children's Protection Act and the Children's Aid Societies provide the means by which this can be done legally. A child of a poor family in a city is so cramped and hindered and restricted in his development that artificial means have to be supplied for his legitimate play activities. In a country district there are plenty of open spaces and children have live playfellows. As one little girl wrote the other day—"We have six horses, twelve cows, forty hens and a dog, a cat and a duck."

TEMPORARY WARDS

In 1927 the Children's Protection Act was amended and judges designated within the meaning of the Act can make children temporary wards for a period not exceeding twelve months.

Number made wards during 1929: Protestant ,224; Roman Catholic, 103.

Temporarily committed in 1927	82
" " " 1928	283
" " " 1929	327

NATIONALITY

Canadian born	521	Chinese born	1
English "	79	Roumanian "	2
Finnish "	1	Swedish "	2
German "	2	Polish "	7
Holland "	1	Italian "	11
Irish "	7	French "	5
Scotch "	24	Belgian "	1
Ukrainian "	6	Austrian "	11
American "	5		
Welsn "	7		

THE TOTAL

It will be interesting to note that the total number made wards of the Society by Court Order since the inception of the work in 1893 is 28,969 and this does not include thousands of children temporarily cared for, advised, assisted, protected, encouraged and sent on their way rejoicing.

UNDER DIRECT SUPERVISION

The number of children on our active list for purposes of supervision is 9,225. This involves many personal visits and much correspondence, and it is a pleasure to report that the great majority of these young people are reported by our local Superintendents to be making excellent progress under favourable conditions. No other branch of the work gives so much anxiety as the placing of boys and girls in scattered fostered homes, with people not related by the strong ties of blood, and that the results should be so satisfactory is matter for congratulation.

In addition to this we have on the Roman Catholic list 1,425 children. These boys and girls come more directly under the care of Mr. William O'Connor who for many years now has given invaluable aid in visiting and encouraging children of the Roman Catholic faith.

RELIGION OF THE CHILDREN

Protestant		Roman Catholic	
Male	268	Male	72
Female	275	Female	78

CAUSES OF COMMITTMENT

	Protestant	Roman Catholic
Neglect	216	33
Desertion of Parent	73	41
Father in prison	22	10
Born out of wedlock	93	30
Theft or delinquency	6	5
Immorality of parents	38	2
Parents separated	28	8
No means of support	42	12
Orphans	25	9

AGES OF CHILDREN COMMITTED

	Protestant	Roman Catholic
Under 3 years of age	136	28
Between 3 and 7 years of age	134	43
" 7 " 11 " " "	137	39
" 11 " 14 " " "	84	26
" 14 " 16 " " "	52	14

WARDS RELEASED FROM SUPERVISION

Protestant	619	Roman Catholic	117

TRUST ACCOUNTS OF WARDS

The various Children's Aid Societies hold in trust for children small sums amounting in the aggregate to	$74,744.46

HOW DO WARDS TURN OUT?

This is a question that is asked by many people, some interested and others through curiosity. In a word, the answer is "They are doing well" when you take into account their mental ability and various handicaps. The chief object is to adjust the child's life so he can best develop his natural talents.

BOARDING CHILDREN

A rather popular movement is the boarding of dependent children in foster homes as an improvement on the old method of maintaining them iin orphanages and shelters. There are some advantages about this but also serious disadvantages. It is apt to discourage the offering of free homes, and indeed we frequently find that when we endeavour to place a child in a foster home we are asked how much we are willing to pay per week and are told that their neighbour receives payment, and naturally they would expect the same treatment. They do not fully realize that the boarded child is merely a temporary arrangement terminable on short notice and that there is no security regarding the permanent care of the child. There are many fine, healthy boys and girls who should be placed permanently in free homes, and we are firmly convinced that these free homes can be found if reasonable effort is made and the work elevated to the high plane of Christian and patriotic service. In the first few years of Children's Aid work, when there was no thought of payment, many fine people opened their homes gladly to the needy child, and they should be encouraged to continue this noble service. It is of course largely in the cities that the boarding out plan has been popularized.

VISITING WARDS IN THEIR FOSTER HOMES

Of the many duties carried out by the Local Superintendents in connection with the social work of the community, perhaps the most satisfactory is that of visiting wards. The following illustration will give an idea of the pleasure derived by an Inspector in making his visits. His report is as follows:

> "It is a pleasure to report that our wards are being well cared for and doing well generally. Children, without exception, have appeared in good health, are being sent to school regularly and making satisfactory progress in their studies, are clothed and treated quite as well as children in their own homes. We have so often duties that are not pleasant in the doing that this part of our work is a welcome break from the routine, and affords the satisfaction of seeing some of the results for which we are striving."

CONSERVATION OF HEALTH

Health conditions are not overlooked as is shown in the report of a Local Superintendent: "A happy family, consisting of father, mother, and three children, was broken into by that dread disease tuberculosis. All were found to be, or to have been, affected. The mother and babe were taken to the ———— Sanitarium, and the little girls to our Shelter. These have been under supervision at the Chest Clinics and one of these is now in the ———— Sanitarium and the other may yet be sent to a Preventorium. The father is continuing his work. We are pleased to help in such a case as this."

GRATEFUL TO THE SOCIETY

Two of our wards have done exceedingly well, writes a Children's Aid Secretary, and will in consequence occupy a position of wide social influence. But, he said, I think the nicest thing I have seen in the whole work is the attitude of a former ward and his wife, who took a little girl because she was an orphan and who said they appreciated what had been done for him by someone else when he was a friendless boy.

DO THEM GOOD TO TAKE CHILD

How to find a foster home is well illustrated by one of our Children's Aid officers, who writes:

"Last month I placed James B., age 5, with Mr. and Mrs. M. They are splendid people and own a fine farm. I had been trying for some time to get them to agree to try one, as I knew it would do them good. As they could not make up their minds I decided to go and see them. I drove nine miles, took the boy, had dinner and left him there. They called me up last night to say that the child was the sweetest little fellow they ever saw and they were all happy. I believe that I have done these people more good than if I had given them another farm."

RESULT OF A BROKEN HOME

"This boy," writes the Superintendent of the Industrial School, "seems determined to lead a lawless life. He has escaped three times and during each absence has been in serious trouble, stealing motor cars, housebreaking, etc." The family history indicates that the parents, after constant quarrelling, had separated and three of their five children were soon in conflict with the law. A broken home is the prolific cause of youthful delinquency.

CHILDREN'S SHELTERS

Much progress has been made during the year in the erection and equipment of shelters. Minor improvements have been made in each of the forty shelters erected previous to this year and three others having been found too small and unsuitable have been replaced by modern buildings. Space does not permit giving a resume of all improvements made, but a brief report on the new buildings and a recently purchased property will show the interest taken by the citizens in Children's Aid work.

CHATHAM—In 1912 a house was purchased by the Society and has been in continuous use until December, 1929, when the new Shelter was opened. The main building is fireproof, with hospital and clinical wards, sunroom, and accommodation for thirty children. The furnishings are the gifts of private citizens or societies, and are complete in every detail. Both shelters were made possible through bequests and donations.

WENTWORTH COUNTY—The County Council has had the house formerly occupied by the Superintendent of the Refuge remodelled for a Children's Shelter. There is accommodation for twenty children with sunroom, playroom and hospital wards, and is well furnished.

OSHAWA—The old shelter, purchased in 1911, having been found too small and unsuitable, the Society decided to erect a building in keeping with the requirements of the work. Departmental regulations have been complied with and the shelter is complete in every way.

PICTON—The County Council purchased a property, situated on the Bay of Quinte, which provides accommodation for twenty-five children. Provision is being made for isolation and detention wards.

SUDBURY—Has also formally opened a splendid new shelter during the past year and this will always be a fitting memorial to the earnest and devoted labours of the late President, Mrs. R. R. McKessock.

OUTSIDE STAFF

During the year four appointments of Local Superintendents were made.

G. F. Thompson succeeding the late W. H. Stewart in Counties of Peel and Halton.

J. S. Davidson, Sudbury, in place of Wm. Greenwood, resigned.

H. Pearson, Gore Bay, to be an Inspector for Manitoulin Island, under the Children of Unmarried Parents' Act.

Col. G .B. Little, York County, instead of H. D. Ramsden, deceased.

George L. Hubbs, Picton, for twelve years Local Superintendent of Prince Edward County, died 20th December, 1929. He has been fittingly succeeded by his son, Ralph W. Hubbs.

F. W. Barrett severed his connection with the Society at Napanee when appointed a provincial police officer for the district. He was succeeded in Children's Aid Work by his son, W. F. Barrett.

GENEROUS MUNICIPAL AID

The value of the Children's Aid Society to the County is attested by the action of County Councils who have assumed the responsibility of financing the work of the Children's Shelter in several instances. The County Councils have shown a most generous spirit in backing up the Society's work.

The following report from a local Superintendent indicates this co-operation:

> "The Society during the year has been financed directly by the County. This method has been in operation for a couple of years, and has been found eminently satisfactory. The Society, of course, scrutinizes very carefully every account which comes in, so that the County is amply protected when paying the accounts. We should further point out, that the fact that the Board does not directly pay accounts, does not cause them to be reckless in the way of expenditure, so that we are thoroughly satisfied that it is costing the County not one cent more than if the Shelter were financed by the Society itself, as was the case several years ago. As a matter of fact, we would point out that the total expenditure this year was approximately $450.00 less than last year."

WHEN PARENTS QUARREL AND SEPARATE

What a train of evil follows the breaking up of a home! Only the social worker who is in the midst of it can fully understand the loss and suffering, not only to the parties directly concerned, but to the entire community. The tragedy is happening over and over again, and the average citizen can hardly grasp the seriousness of it all. Here is the case of two families engaging attention at the present time: In one of our smaller towns a man deserted his wife and three children and no attempt seems to have been made to prosecute him for this offence. After being reduced to poverty the wife answered an advertisement for a housekeeper in another town thirty miles away. The advertiser was a married man having a wife and two children, but after constant drinking and quarrelling on his part she left him, taking her children to relations in another city. The first woman mentioned accepted the position on condition that she could take her three children with her. Within a year she had a fourth child, and she was the second to get into that condition. She received no wages and as a result of the immoral conditions that prevailed, the Children's Aid Society had to take charge of the children at the expense of the municipality. Just this one case opens up a whole series of social troubles and expense, and is merely typical of many others. A stricter check should be kept on desertions and separations, and every possible effort made to keep married people together.

CHILDREN AND FOSTER HOMES

Some Rules for the Guidance of Home-Finding Societies

Those who are engaged in the work of finding foster homes for children will find these suggestions useful:—

Aim constantly for a high type of home where children will be received from motives of service to and not from the child. This can best be brought about by publicity and by appeals to the generous impulses of good people.

Homes should be carefully investigated by personal visits instead of correspondence.

Children going to homes should be amply provided with clothing.

They should be escorted to the prospective home by a friendly official or volunteer.

There should be a definite agreement in writing.

There should be periodical visits to see that all is going well.

When visitor is calling at the home, clothing and schooling especially should be enquired into.

When children pass school age and are giving foster parents valuable assistance, reasonable payment should be insisted upon.

Children who are unhappy in their foster homes, or who are spoken of disparagingly, should be promptly removed to a more congenial atmosphere.

Where marked ability is evident, the child should be assisted to develop his talents, for his own and the community's benefit.

If after a fair period of probation official visiting is found hurtful to the child's interests, the rule might be relaxed—the main object to keep in view being the child's best welfare. Where conditions warrant, legal adoption should be urged.

As the youth advances toward maturity, advice and assistance might well be given so that he may be put in the way of a suitable living, and then the Society can well be proud of a duty toward the child faithfully and conscientiously discharged.

INDUSTRIAL SCHOOLS

The following report gives the number of pupils under supervision in the four Industrial Schools during the year, 1929:

Alexandra School for girls (Protestant)	135
Victoria School for boys (Protestant)	253
St. Mary's School for girls (Roman Catholic)	64
St. John's School for boys (Roman Catholic)	152

A summary of children committed to the Schools for 1927 to 1929 is as follows:

1927	562
1928	572
1929	597

During the year Auxiliary or Vocational Classes were started in the Alexandra and Victoria Schools. Excellent results have been obtained after one year's operation at the Alexandra School, and good progress by the pupils in Victoria. The Class at this latter School was only formed in September. Results have proven that the subnormal child can be developed to a self-supporting stage if placed in a class with other pupils of the same intelligence quotient, and taught a simple trade or industry.

The Alexandra School for Girls has normal accommodation for one hundred pupils but at the present time has a population of one hundred and thirty-five, with constant demands for further admissions. This property is now hemmed in with city dwellings and before long removal to a better location will be imperatively necessary.

FINDING SITUATIONS

Both the Industrial Schools for boys are over-crowded, and the Superintendents state that they find it increasingly difficult to secure employment for lads when ready to leave the School. Representatives of the Schools should be sent out to look up situations and not wait until applications are received. This home-finding and supervisory work has not been given the prominence it deserved and too much emphasis cannot be laid on the importance of getting graduates of these institutions promptly and properly settled in good homes with suitable enmployment.

THE HOPELESS REPEATERS

We who have been in this class of work for a number of years know that there is a great problem yet to be solved in dealing with the youths who are incapable of self-direction and government. They appear in Court for some breach of the Criminal Code and are given a definite sentence of three months up to two years. We have seen young fellows of this description convicted twenty or thirty times and after each short sentence they go out to immediately commit fresh depredations. So well is this understood by police officials that they keep close record of discharged convicts and look them up when new crimes are reported.

What might prove a useful guide is our Industrial School law, under which no young person is given a fixed sentence. He is simply sent to the guardianship of the School during minority and can be placed out on parole at any time. To avoid undue detention, however, the Act provides a maximum of three years in the Institution, with provision for his return if he fails to make good.

The crucial time in the life of a boy is his first conviction. If at all possible the reformatory or prison should be avoided, as the associations there are not likely to be helpful. Guardianship and supervision by a well-organized benevolent society, removal from former surroundings to good healthy environment, with the co-operation of good people, is the nearest approach to the solution of a very diffiuclt problem.

KEEP CHILDREN IN NORMAL SURROUNDINGS

The best kind of reform is to keep people out of prison and especially to keep children out of the large public institution. There is the constant danger of relying upon the reform school or prison, simply because it has been an old established custom to send wrong-doers there. Too often the institution deteriorates into a school for the dissemination of criminal ideas and plans.

The work to pin one's faith to is restitution and a thorough system of probation. This would permit of the youthful offender or man being at liberty and yet under constant surveillance and required to pay back the loss or injury done. The prison sentence is regarded by the prisoner as complete absolution and the injured party gets very little satisfaction.

Prominence should be given to religion and yet this cannot well be included in a set of rules. The genuine religious influence cannot be formalized. As a general principle, however, it can be laid down that the Christian spirit should animate all who are in authority over the erring. Effective redemptive work is individual and personal. The institution itself, that is, the building, has little to do with it. The world is made better or worse by the style and tone of conversation, the moral atmosphere which each one helps to create. When the heart is set upon what is high and noble then the official or social worker becomes an active agent in bringing about the steady diminution of crime.

Men should not be put in prison for purposes of retaliation or revenge, but should be treated as sick persons,—mentally and morally diseased. To restore them to normal condition attention should be paid to their physical health and then to getting their mental attitude into harmony with what is worthy and up-lifting,—inspiring in them hope and courage to face life's duties manfully and honestly. The sub-normal person of criminal tendencies should be placed at the earliest moment under permanent custodial care.

SPARKS FROM THE SOCIAL ANVIL

Too often the poor suffer from an overdose of advice. no kidding eh?

If we look for the bad in other people we can always find it.

An excellent law or system may prove a disappointment unless in the administration there is a happy combination of sanity and enthusiasm.

Religion and social work can never be satisfactorily divorced. The joy of service to be a joy, must have a spiritual foundation.

Litigation rarely pays, for the winner is often the loser, and a bitterness is created that years cannot eradicate.

Profanity, vulgarity and indecency mar our public amusements. The great mass of the people desire entertainment that is clean and wholesome, and managers of play-houses should not permit anything else.

Criminals can be dealt with in two ways: Locked up and made as miserable as possible by way of punishment, or changed in the inner man so that the desire to do wrong will be taken away. The former will always be the popular method, because it calls for no sacrifice and no special ability.

Philanthropic work that is done wisely, thoroughly, patiently, will never fail in results. The benefits are not always visible to the worker but an improved life will carry on to a later generation.

There must be idealists and enthusiasts to prepare the way for the practical.

"Vested rights" is a favourite legal argument when there is a popular demand to abolish some injustice of long standing, but on investigation it will often be found that these "rights" were originally founded on grievous wrongs.

Notwithstanding the experiences of their own childhood the number of parents and teachers who are able to fully and sympathetically understand the child-mind are very few in number. If they could apply the emotions and experiences of their own youth in the training of children what an amount of harshness and misconception would be avoided!

When large groups of children are fed by schedule some are certain to go hungry just as some are starved spiritually by the group system.

To assist members of poor families to find suitable employment is infinitely better than to put their names on the charity list.

Social Settlements should be the channel for teaching the neighbourhood rational ways of living.

Do not make the common mistake of thinking that the poor only need money. A well-meaning but tactless lady thrust a five dollar bill on a poor family and met with a scornful repulse. The money was needed badly enough but the spirit of condescension was bitterly resented.

Faith in the essential goodness of childhood should be the watchword and inspiration of all who labour for their happiness and protection.

It is the glorious privilege of the Social worker to speak words of comfort and cheer, to strengthen good resolutions, and re-establish self-respect and moral integrity.

Officially-administered charity at the expense of the taxpayers, however well-organized, can never be so effective or far-reaching in results as the private or benevolent society, where love and neighbourly sympathy go hand in hand with monetary aid.

Chronic pauperism is the direct outcome of lavish and unwise charity. Once created it only dies with the individual, if indeed it is not transmitted to the growing generation.

No moral legislation should be enacted hastily, even though there is some grumbling on the part of advanced thinkers. There must first be a strong concurring public sentiment; necessity must be clearly shown to exist and the way prepared for effective enforcement. Otherwise it is simply adding one more to many statutes that are treated with indifference.

An ill-nourished body and retarded mental growth in childhood, together with poor environment and absence of inspiring example, leads invariably to an immoral and criminal life. Social work should be so organized as to effectively reach such families.

After twelve years of age many sturdy boys have an aversion for school life. They see only the drudgery and discipline of it all, and not the important influence it is to have on their future welfare. Every instinct calls for movement and muscular activity. This is why manual and industrial training is now becoming so popular.

Social worker writes—"Can you loan me some nice pictures of dirty children."

Treat a child with injustice and the offence will never fade from the youthful mind. Adults too often forget this and parents are just as liable as strangers to make this mistake. A farmer gave his son a young colt and the boy accepted the gift in all good faith, but when the animal became valuable the father sold it for two hundred dollars and kept the money. The lad so keenly resented this injustice that he hired out with a neighbour and no coaxing or pleading could induce him to return to his home.

Bringing young children before the Juvenile Court for trifling misdemeanors is almost as bad as having no court at all. A little fellow enjoyed the excitement of court trial so much that before ten years of age he had been up seven times! His first appearance was where the mistake was made. A parental spanking should have been administered in private.

Reversals and disappointments tend to make us philosophers. At first we ignore the critics but as they keep on knocking us we begin to reflect and hesitate, and if not made of hero stuff we finally decide to give up the daring enterprizes of life and rejoin the ranks of the indifferent.

Toward progress and reform we travel by a narrow and tortuous way, with thorns and obstacles at every turn. But how broad and smooth the road of indifference, sloth, complaisance and worldly policy! Little wonder that so few are inclined to leave the well-worn path.

Most people spend a lot of time doing nothing—busy but no results—no purposeful achievement—the daily life barren of all useful service, and yet it is from just such people that criticism and opposition comes to the few who are blazing the way to better things and bearing the burdens of the weak and the oppressed.

Wise social legislation and fair play is steadily diminishing the old-fashioned plan of indiscriminate charity. The self-respecting poor do not want it and those who would accept it gladly should be denied it for their own good. On the other hand, neighbourly assistance and friendly council. if prompted and guided by the right spirit, does not necessarily harm or offend the recipient. This is to truly "consider" the poor.

It is a great responsibility to undertake the care of other people's children and those who do so should always be ready to welcome public inspection and reasonable criticism. Only in this way can the safety and happiness of helpless little ones be assured.

Candor is not always desirable. There are times when it is justifiable to dissemble or at least to be discreetly silent. Your very honest, excessive consciousness, must-speak-my-mind sort of individual is more likely to be dreaded and abhorred than honoured by honourable people.

DEVELOPING SELF-CONTROL

Children should be accustomed to see and handle money and valuables so that they may acquire habits of self-control. Let them know that you trust them and then if they fall before temptation there is the opportunity to advise and strengthen the weak will before it is too late. Strength is gained through conflict.

GOOD JUDGMENT NEEDED

Supervision of young people who graduate from reform schools is necessary and desirable, but there are times when it can be carried too far. Hear this pathetic appeal from a boy: "Please don't tell the people I am with about the place where I used to be." We knew a boy who lost a good situation because an injudicious visitor called at his place of business to enquire about him.

THE RURAL SOCIAL PROBLEM

We are still a long way from solving the social problem as it affects rural communities. All our efforts have been cencentrated on big cities where wealth and service are freely given. In the scattered and isolated districts social welfare work receives but scant support and the worst evils are apt to flourish unchecked.

A LESSON IN SERVICE

In "Adam Bede" when Hetty is in disgrace and in prison she is visited and comforted by Dinah Morris, who prays; "See Lord, I bring her to thee as they of old brought the sick and helpless and Thou didst heal them. I bear her in my arms and carry her before Thee. Come, mighty Saviour, let the dead hear Thy voice, let the eyes of the blind be opened; melt the hard heart, unseal the closed lips, make her cry with her whole soul, "Father I have sinned.' '

THE TIE THAT BINDS

To unite in closer bonds of affection and protection the home and the child is the underlying principle of all social legislation. To depart from this is to create confusion and defeat the ends of justice. Organizations and institutions should constantly revise their programme with this end in view.

BE SWEETLY REASONABLE

Have patience with your children, give them time, encourage them. "Be to their faults a little blind and to their virtues very kind." They will only be children a few short years and if you are tolerant and just, when they are men and women their lives will be full of sweet memories and you will be spared many vain regrets.

MARRIAGE OF THE WEAK-MINDED

Greater restraint should be placed on the marriage of persons of weak intellect. A girl of this description was about to be sent to an institution when a man of exceedingly low mental capacity came forward and proposed marriage as the solution. This was considered a fine idea and a clergyman was quite willing to perform the ceremony, notwithstanding the fact that his fee had to be taken out in promises. No one stopped to think what the ultimate cost to the community would be! Ten years later a letter was received describing a wretched home. It proved to be that of the above woman, now the mother of three neglected children.

PERSONAL HYGIENE

Parents and guardians should gradually prepare the boy or girl for the adolescent period and not leave the important work of sex education to the evil-minded. Ignorance of personal hygiene results in untold misery to vast numbers of young people. To be fore-warned is to be fore-armed.

LOVABLE BAD BOYS

Strange, isn't it, that so often the worst boys are the most lovable—and yet not so strange after all, for their badness is more apparent than real. Some are fairly successful in concealing their true character; others more indifferent get credit for worse sins than they commit. So-called badness is usually excessive vitality bubbling over and frightening people who have forgotten their own youth.

TO SAVE THE DELINQUENT

The only way a delinquent child or adult can be permanently helped is by patient persistent personal effort on the part of some interested friend. It takes a soul to save a soul—neither law nor system can supply the motive power for a soul's redemption. Someone must pay the price.

VALUE OF ENTHUSIASM

Instead of ridiculing and discouraging the enthusiast he should be shielded and supported, for it is he who puts life into a doubtful enterprise and wins success where failure was predicted.

THE WARDEN'S SUMMING UP

Walking through the Penetentiary with the Warden he remarked as we passed group after group of young fellows: "All here because of early neglect, parental care lacking: home life and example not what it should have been."

TRY TO UNDERSTAND THE OFFENDER

Talk to the worst offender against our laws, study his early teaching and environment, ascertain his mental attitude, get into his shoes, as it were, and then you will be fairly qualified to pass sentence.

VARIETY AND ENCOURAGEMENT

Children require companionship and recreation. No child will ever be happy in a home where the little attractions of childhood are lacking, where there is no variety of interest, no love shed around their pathway. And if there is not this natural growth in happiness there will be a dwarfed and maimed life—an emptiness and barrenness where there should be fullness of joy and useful service for others.

GUIDE INSTEAD OF PUNISH

It is wrong to punish children for offences they but faintly understand, and to which they have been trained or driven by immoral parents or guardians, or lack of guardianship. What such children need is Christian home influence. Punishment seldom exercises more than a passing influence, but love can unlock the heart and redeem and permanently reclaim the offender.

PREVENTION

Our chief aim as social workers must always be prevention—that is, interviewing parents and friends of children as well as the children themselves—to secure good home care and training, and check at once evil teaching or example, idleness, street-wandering, pilfering, etc.

J J Kelso

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CHILDREN'S AID FINANCIAL RETURNS

Place	Receipts	Expenditures	Surplus	Deficit
	$ c.	$ c.	$ c.	$
Algoma and Sault Ste. Marie	17,976.16	17,961.39	14.77	
Brant and Brantford	8,836.25	7,939.45	896.80	
Bruce	6,480.89	5,685.94	794.95	
Carleton and Ottawa	10,190.42	10,081.19	109.23	
Cochrane and Timmins	11,590.02	11,378.27	211.75	
Dufferin and Orangeville	7,061.99	6,494.35	567.64	
Elgin and St. Thomas	10,497.86	8,458.99	2,038.87	
Essex and Windsor	21,407.58	21,391.70	15.88	
Fort William	7,860.54	8,911.47		1,050.93
Frontenac and Kingston	7,297.32	7,297.32		
Grey and Owen Sound	7,110.75	5,873.13	1,237.62	
Haldimand	5,779.70	5,758.10	21.60	
Haliburton	941.23	941.23		
Hamilton	18,726.64	18,970.45		243.81
Hastings and Belleville	13,487.82	13,170.96	316.86	
Huron	3,834.71	3,834.71		
Kenora	2,379.59	1,552.66	826.93	
Kent and Chatham	9,311.47	9,206.40	105.07	
Lambton and Sarnia	3,695.33	3,377.44	317.89	
Lanark	1,649.28	1,649.28		
Leeds and Grenville	2,352.04	2,387.98		35.94
Lennox and Addington	2,529.82	509.37	2,020.45	
Lincoln and St. Catharines	7,032.61	7,032.61		
Manitoulin Island	491.73	166.36	325.37	
Middlesex and London	24,148.97	24,018.09	130.88	
Muskoka (District)	1,871.72	65.45	1,806.27	
Nipissing and North Bay	9,477.23	9,460.57	16.66	
Norfolk	8,586.25	8,586.03	.22	
Northumberland and Durham	5,687.33	5,561.18	126.15	
Ontario and Oshawa	12,755.07	12,668.89	86.18	
Oxford and Woodstock	8,898.16	8,414.39	483.77	
Parry Sound (East)	2,146.29	1,880.09	266.20	
Parry Sound (West)	2,792.25	3,017.93		225.68
Peel and Halton	6,119.05	5,777.87	341.18	
Perth and Stratford	5,834.95	5,281.93	553.02	
Peterborough	7,242.23	5,937.84	1,304.39	
Port Arthur	5,390.86	4,855.12	535.74	
Prescott and Russell				
Prince Edward	1,549.09	1,485.95	63.14	
Rainy River (District)	1,950.57	1,870.08	80.49	
Renfrew	4,649.05	4,248.74	400.31	
Simcoe and Barrie	12,365.64	12,365.64		
Stormont, Dundas and Glengarry	1,182.25	1,138.50	43.75	
Sudbury	8,911.13	8,911.13		
Temiskaming	5,465.08	5,121.85	343.23	
Victoria and Lindsay	5,279.36	5,279.36		
Waterloo (County)	10,043.19	9,852.96	190.23	
Welland (City)	2,676.61	3,027.84		351.23
Welland (County)	9,858.00	10,120.43		262.43
Welland (Niagara Falls)	4,852.10	4,560.80	291.30	
Wellington and Guelph	8,421.80	7,243.58	1,178.22	
Wentworth	621.22	621.22		
York	8,153.15	8,468.22		315.07
Toronto C.A.S.	163,944.76	180,131.38		16,186.62
St. Vincent de Paul, Toronto	36,685.60	35,179.17	1,506.43	
Total	576,080.71	575,182.98	19,569.44	18,671.71

LEGAL ADOPTION ACT

THIS Act was first passed by the Ontario Legislature in 1921 and re-drafted in 1927. The Superintendent of the Children's Aid Branch was appointed by Order-in-Council to administer the law and presents this report:

There is probably no more pleasant or satisfactory branch of Child Welfare work than that of legal adoption. It is the culmination of a happy family relationship, and in the case of infants, the cementing of a bond that grows stronger with each advancing day.

During the past year there were 639 cases of legal adoption, each one investigated, certified and approved to the Judge for final sanction and ratification. Of this number it is interesting to note that 208 were infants under three years of age; 155 were from three to four years; 124 were from five to seven years, and 152 were over the latter age. In addition to the 29 children adopted by the mother and husband there were 103 children adopted by relatives.

As a safeguard against adult adoptions being secured through improper means the Adoption Act stipulates that the Attorney-General must give consent before the application is submitted to the Judge. There were sixteen such applications and adoptions during the year. In every instance the persons adopted had resided with the foster parents for many years, and the desire was to give what was only an agreement or contract the power and effect of a legal order. These were, in fact, so many additional evidences of the strong and lasting affection that springs up between children and their foster parents. There were quite a number of adoptions of children who had been in their foster homes from five to ten years—some of them before the Adoption Act was passed.

It is a remarkable fact also that none of the adoptions have been contested—all parties satisfied and happy and with no regrets over hasty or unwise action. Many of our readers have noticed in the newspapers controversial action in the High Court for the guardianship of a child. These were cases where the child had been taken by verbal agreement or simple contract, and legal adoption not applied for. When all the circumstances justify the application it is most desirable in their own interests that foster parents should secure the protection offered by the Adoption Act. Many homes have been made happy through this law and we have often been made happy through administering it.

Since the Adoption Act was passed the following number of children have been legally adopted:

Year ending October 31, 1921	20
“ “ “ “ 1922	400
“ “ “ “ 1923	1,002
“ “ “ “ 1924	600
“ “ “ “ 1925	648
“ “ “ “ 1926	660
“ “ “ “ 1927	639
“ “ “ “ 1928	663
“ “ “ “ 1929	639
	5,271

The following table gives some general information respecting the children for whom Orders of Adoption were signed during the year dating from November 1, 1928, to October 31, 1929:

Children's Aid Wards	Soldiers' Aid Commission Wards	Wards of Other Organizations	Children of Unmarried Parents	Abandoned Children—Foundlings	Orphaned Children	One Parent living	Both Parents living	Husband Adopts Wife's Child	Parents Divorced	Children adopted a Second Time	Over 21 Years of Age	
195	2	3	269	3	9	81	24	29	2	6	16	639

THE CHILDREN OF UNMARRIED PARENTS' ACT

A LARGE and ever-growing work is carried on under The Children of Unmarried Parents' Act. The Superintendent of the Children's Aid Branch is also Provincial Officer under this law, and his report is submitted herewith:

During the year ending October 31st, 1929, the number of children reported born out of wedlock was 1,886, as compared with 1,865 the previous year. Of these, 886 cases were investigated in Toronto District by the Provincial Officer. Outside of this district, the investigations were made by our Local Officers under the above Act (usually the Superintendents of the various Children's Aid Societies) who report proceedings to the central office for advice and direction. Schedule "A" gives the number of cases reported annually since the Act was passed, and also shows how the cases for the fiscal year were dealt with.

SETTLEMENTS

386 cases resulted in settlements by Agreements and Affiliation Orders, and 79 cases in addition were reported as having been settled privately without record of any Agreement entered into. In the latter instances the persons concerned are frequently friends or relatives. Sometimes marriage is pending and the putative father is paying the mother direct. Where the child dies at, or soon after birth, a cash settlement covering expenses is occasionally made direct to the mother or the hospital, doctor, etc. The Provincial Officer obtains as much information as possible under such circumstances for our records from the social agency interested, or the Local Officer of the County or District.

(a) AGREEMENTS

Of the settlement by Agreements, 292 were entered into by the Provincial Officer, of which 91 were for lump sums running from $100 to $1,500, and 10 for expenses only of from $20.50 to $88.45. The remainder (191) were for expenses and weekly maintenance of from $2 to $6.25 for a sixteen year period. In addition to the above, 59 Agreements were entered into by the Provincial Officer on cases reported in other years. Cash settlements, or part settlements, under Agreements with the Provincial Officer amounted to approximately $34,770. This type of settlement has a threefold advantage over the private one, as where there is default, the machinery of the Act may be put in motion to enforce collections; the child's money is guarded against being spent foolishly; and the man is protected as it ensures him fair treatment and an Agreement in accordance with his means.

There were 19 private Agreements, approved by the Judge, filed during the year with the Provincial Officer. These are usually made between the mother and the father of the child and where the mother is a minor, one of her parents is added as a party. Payments under these Agreements are made to the Provincial Officer, cash receipts alone amounting to approximately $2,925. Where there is default under a private Agreement, civil action to collect must be taken by the mother at her expense, and where such an Agreement is not approved by the Judge, it may be voided by the Provincial Officer should the facts submitted make this desirable.

(b) Affiliation Orders

As a result of applications to the various Judges under the Act, 75 Affiliation Orders were made, 60 of which direct payment of expenses and maintenance of from $1 to $5 weekly, and two, maintenance of $10 and $15 monthly, for the sixteen year period. Nine are for lump sum settlements ranging from $100 to $1,000, and four for expenses only of from $51.50 to $65.75, where the child has died. Twenty-four applications were dismissed by the Judge for lack of corroboration. In addition, 62 Orders were made on cases reported in previous years. Cash settlements, or part settlements, under Affiliation Orders, amounted to approximately $3,088.

The Crown Attorneys, and in some instances, local solicitors act for the Provincial Officers without expense to the mother of the child. Sometimes solicitors are privately retained by the mother. In such cases, the Provincial Officer is represented at the hearing to protect the child's interests.

Appeals

Appeals have been fewer in number since the Amendment in 1927 made it possible to apply to the Judge for a reopening of the case on fraud being shown or upon the discovery of new evidence. Only one appeal was heard during the year, a new trial being ordered. A decision in a case appealed the previous year was given in March, 1929, dismissing the appeal. In each instance, the application for appeal was made by the father.

Collections

All moneys under Agreements and Orders are payable to the Provincial Officer at Toronto, lump sum settlements being passed on to the Public Trustee in whose hands the money is either left for investment or may be requisitioned from time to time by the Provincial Officer for the child's needs. The receipts during the year totalled $126,558.49, with disbursements of $109,505.84. Cheques are sent monthly to the mother or whoever has the care of the child. Three collectors are constantly at work on Toronto cases, while our Local Officers assist us in other parts of the Province. This part of the work is rendered more difficult by the fact that many of the men are unskilled labourers without steady employment, and many are of the nomad type, having no settled place of abode.

Schedule "C" gives a comparative statement of receipts and disbursements since the Act came into force, as well as a statement of the year's finances.

VARIED AGREEMENTS AND ORDERS

Our records show that 18 Agreements with the Provincial Officer and 35 Orders were varied during the year. These figures, however, are not confined to cases arising during the current year. Seven of such Agreements were varied to lump sum settlements ranging from $100 to $600. The others reduced the rate of maintenance. Twenty-eight Orders were varied to lump sum settlements of from $100 to $1,000. Where an Agreement or Order is varied to a lump sum settlement the money is usually paid in cash. Cash payments under Varied Agreements amounted to approximately $1,930 and under Varied Orders to $10,337.40.

COURT ACTION TO ENFORCE AGREEMENTS AND ORDERS

Where the terms of an Agreement with the Provincial Officer are not carried out, application is made to the Judge for an Affiliation Order. Fifty-four such Orders were made during the year, 46 of which covered expenses and weekly maintenance of from $1.75 to $5, and 8 covered lump sum settlements of from $28.28 and $92 (expenses only) to $445. As a result of this action, $475 was collected in cash. Where there is prolonged delay in the matter of payments under an Order, a summons is applied for. One hundred and thirty-seven summons were issued by the Judge during the year just ended, resulting in cash payments of approximately $1,976.

These figures have reference as well to cases reported in other years.

STATISTICS

The nationality, occupation and other facts relating to our cases are dealt with in Schedule "B" to this report. Unfortunately, we are often unable to get complete data.

CARE OF INFANTS

Our records for the year show that 1,258 children were with the mothers, 200 in boarding homes, 56 in foster homes, 53 legally adopted and 71 committed as wards of the various Children's Aid Societies of the Province. Eighty children died and 15 were reported as stillborn. Where death occurs, a medical certificate is obtained, if possible, to show the cause of death. In addition, 218 children were legally adopted and 61 children made wards, whose cases were reported in previous years.

Every effort is made to see that children placed in boarding homes are not left there indefinitely. Frequently the mother pays her share of the maintenance regularly and has in mind taking the child herself as soon as she is able to do so. In other cases, the children are listed for adoption and placed as suitable homes becomes available. Unfortunately, cases arise where the mother disappears and the Provincial Officer and the social agency interested are unable to locate her whereabouts.

REPEATERS

Cases of this type reported during the year numbered 191. Where only one man is involved marriage occasionally ensues, provided this is possible. Where there is more than one man, the mothers usually come under the class of mental defectives and require special supervision.

ACKNOWLEDGMENT

As formerly, we are greatly indebted for the cheerful and co-operative service rendered by the social organizations of Toronto, Montreal, Quebec and the border cities of the United States, as well as the Provincial Governments of Western Canada. The assistance given by the Children's Aid Societies, Infants' Homes, hospitals, maternity homes, and public health nurses, as well as the legal and medical professions, the newspapers and the Police force of the Province is also gratefully acknowledged. In addition, our own Local Officers have rendered excellent and self-sacrificing service.

SCHEDULE "A"

TOTAL NUMBER OF CASES

Comparative report showing number of cases dealt with from July, 1921, to October 31st, 1929.

1921		
July 1st, 1921, to October 31st, 1921	102	cases were dealt with
1921-1922		
October 31st, 1921, to October 31st, 1922	672	" " " "
1922-1923		
October 31st, 1922, to October 31st, 1923	1,162	" " " "
1923-1924		
October 31st, 1923, to October 31st, 1924	1,205	" " " "
1924-1925		
October 31st, 1924, to October 31st, 1925	1,347	" " " "
1925-1926		
October 31st, 1925, to October 31st, 1926	1,705	" " " "
1926-1927		
October 31st, 1926, to October 31st, 1927	1,724	" " " "
1927-1928		
October 31st, 1927, to October 31st, 1928	1,865	" " " "
1928-1929		
October 31st, 1928, to October 31st, 1929	1,886	" " " "
Total	11,668	

N.B.—The above statement indicates a yearly increase in the number of cases brought to our attention, rather than any increase in immorality.

NEW CASES FOR YEAR

Statement showing number of cases dealt with during last fiscal year.

From October 31st, 1928, to October 31st, 1929	1,886	cases were dealt with.
Of these	176	are pending.
“	456	have become financial cases.
“	1,245	have been closed.
Of the financial cases	292	were settled by agreements with Provincial Officer.
“ “ “	75	by court orders.
“ “ “	79	by private settlements without agreements.
“ “ “	19	by private settlements approved by the Judge.
Of the closed cases	465	cases no action was desired.
“ “ “	24	cases were dismissed by the court for lack of corroborative evidence.
“ “ “	288	cases were closed for lack of corroboration for court action.
“ “ “	263	cases man disappeared.
“ “ “	71	cases the couples married.
“ “ “	71	cases there was no data.
“ “ “	72	cases were closed for various reasons such as, death of man, deportation of woman, criminal action taken.

SCHEDULE “B”

CHILDREN OF UNMARRIED PARENTS’ ACT

AGES

	Women	*Men*
Under 20	787	(Record not kept.)
21–30	701	
Over 30	128	

NATIONALITY

Canadians	1,021	748
English	258	154
Scotch	144	95
Irish	72	92
Foreign	155	165

OCCUPATION

Domestics and Waitresses	721	(Record not kept.)
Factory	195	
Stenographers and Clerks	141	
Miscellaneous	361	
Housewife	69	

MARRIED OR SINGLE

Single	1,467	988
Married	154	325

N.B.—The above figures are only approximate as there are a number of cases in which we are unable to get any data.

SCHEDULE "C"

Cildren of Unmarried Parents' Act
Finances of the Year
Current Account

November 1st, 1928, to October 31st, 1929

Total Amount Collected			$126,558.49
Disbursements			
Legal		$ 884.07	
Medical		4,738.00	
Hospitals			
Hamilton	$ 260.25		
Kingston	382.55		
London	897.96		
Ottawa	416.00		
Toronto	660.75		
Salvation Army Hospitals	1,157.95		
Miscellaneous	1,513.52		
		$ 5,288.98	
Maintenance	$ 90,164.42		
Haven and Victor Homes	114.80		
Humewood House	144.00		
Paid to Children's Aid Societies	928.95		
Catholic Welfare Bureau	1,129.68		
City Relief	374.11		
Infant's Home, Toronto	4,628.93		
Infant's Home, Hamilton	656.90		
Sundries	453.00		
		$ 98,594.79	
Total disbursement		$109,505.84	
Paid to The Provincial Treasurer Under Section 30, Sub-Section (1) of Unmarried Parents' Act		$ 923.60	

TRUST FUNDS

Children's Aid Wards of the Provincial Government	$ 2,946.63
Total of funds transferred to the Public Trustee to October 31st, 1929	164,652.31
Total Trust Funds	$167,598.94
Less Cheques requisitioned to October 31st, 1929	55,497.95
	$112,100.99

COMPARATIVE STATEMENT OF RECEIPTS AND DISBURSEMENTS

From July, 1921, to October 31st, 1929

	Receipts.	Disbursements.
1921	$ 691.00	$ 40.00
1921-22	27,066.81	13,954.00
1922-23	57,113.03	38,663.66
1923-24	73,258.76	57,698.63
1924-25	86,105.00	71,908.60
1925-26	88,353.80	79,540.90
1926-27	95,274.72	93,395.11
1927-28	110,291.85	112,114.88
1928-29	126,558.49	109,505.84
	$664,713.46	$576,821.62

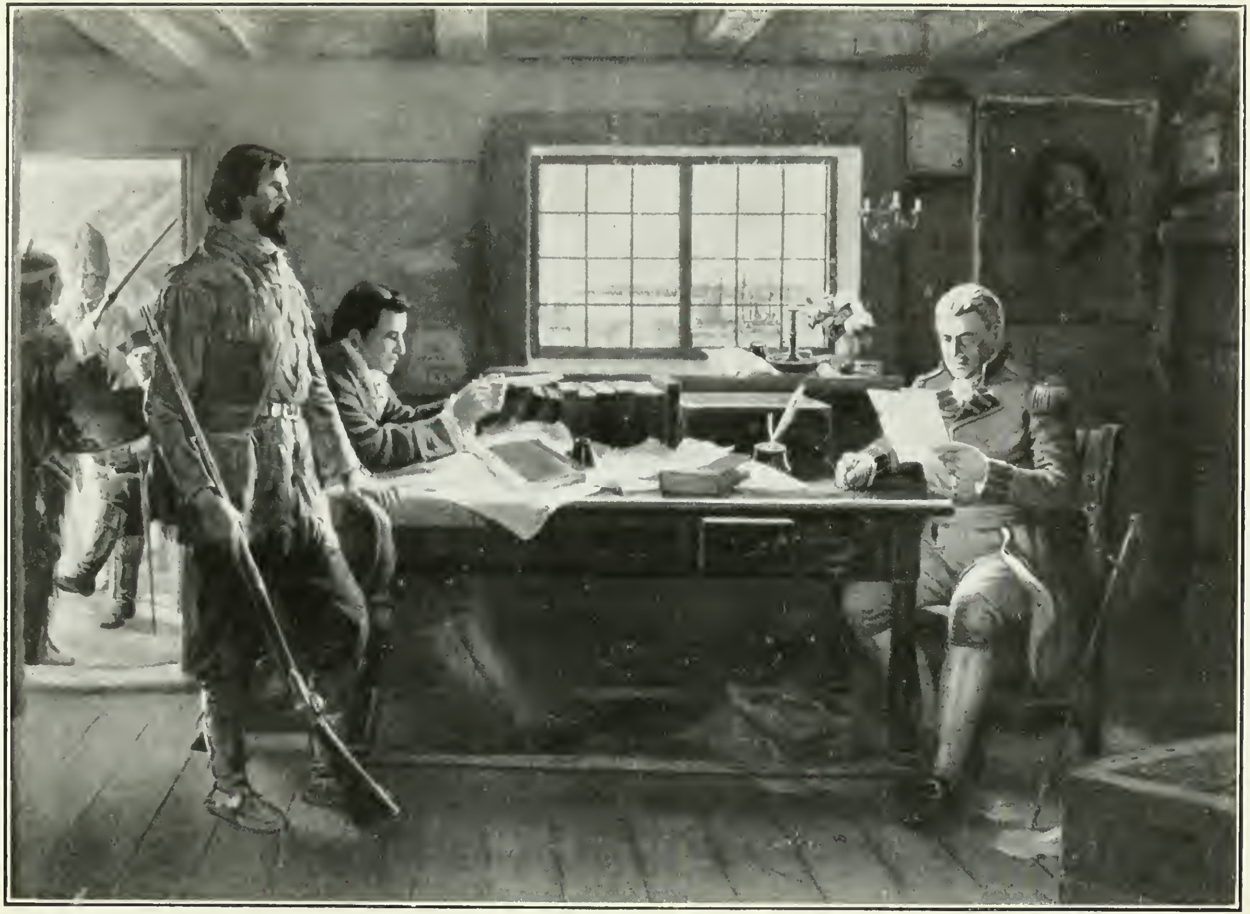
All of which is respectfully submitted.

J. J. Kelso,
Superintendent and Provincial Officer.

1 Queen's Park Crescent,
Toronto, March, 1930.

REPORT OF THE DEPARTMENT OF PUBLIC RECORDS AND ARCHIVES OF ONTARIO

1929



Interior View of Navy Hall, Newark. Governor Simcoe, William Jarvis, Secretary, and Courier with Dispatch from Indian Territory

EIGHTEENTH REPORT

OF THE

Department of Public Records

AND

Archives of Ontario

BY

ALEXANDER FRASER, LL.D.

1929

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO
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ONTARIO

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1930

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TO HIS HONOUR THE HONOURABLE WILLIAM D. ROSS, LL.D., ETC.,
Lieutenant-Governor of the Province of Ontario.

MAY IT PLEASE YOUR HONOUR:

I have the pleasure to present for the consideration of Your Honour the Report of the Department of Public Records and Archives of Ontario for the year 1929.

Respectfully submitted,

J. D. MONTEITH,
Treasurer of Ontario.

TORONTO, 1929.

THE HONOURABLE J. D. MONTEITH, M.D., M.P.P., ETC.,
Treasurer of Ontario.

SIR,—

I have the honour to submit to you the following Report in connection with the Department of Public Records and Archives of Ontario.

I have the honour to be, Sir,
Your obedient servant,

ALEXANDER FRASER,
Deputy Minister.

TORONTO, 31st December, 1929.

"The world is now aware that historians are to be doubted, that State Papers, even Acts of Parliament, may deceive—may be coined for the purpose of deceiving. But family documents, the private letters, the household accounts, the memoranda scratched in the leaf of an old almanac, reach us without suspicion, and carry conviction about things as important to happiness as wars and treaties."—Professor Cosmo Innes.

"——It is very difficult to compare human lives at different times and in different places. Yet without such comparisons, explicit or implicit, social history can teach us nothing."—G. G. Coulton.

Ex Rebus Antiquis Erudito Oriatur

PREFATORY

Following last year's Report in due sequence, this volume, the eighteenth in the series, contains, in the main, original documents concerning the peopling of the Province of Upper Canada in the epochal years from 1792 to 1796, covering the entire Administration of John Graves Simcoe, first Lieutenant Governor of the Province.

In 1791 the Province of Quebec was divided into Upper and Lower Canada, each Province having its own legislature and separate government.

Colonel Simcoe was detained at Quebec on account of the non-arrival of the appointed members of the Executive Council, without a quorum of which he could not be sworn in nor enter upon his official duties. It is a curious coincidence that on his departure from Canada in 1796 he was again delayed at Quebec for a considerable time owing to an unexpected interruption of his sailing arrangements.

In this enforced interval, Simcoe was engaged in planning the structure of government for the Province—the social and institutional life of which he was the inspirer and real founder; so that on his arrival at Kingston early in the month of July, 1792, he was ready, without delay, to take up the work of his office. The Executive Council was at once organized. The first members to be sworn in were William Osgoode and Peter Russell. The Council thus constituted tendered the oaths to His Excellency. The oaths administered at that time may be referred to in Appendix II.

Then began the daily meetings, the record of which bears testimony to the unceasing activity and to the thoroughness with which, to the minutest detail, the arduous duties of the Lieutenant Governor were discharged.

He began by reading to a meeting of the magistrates and principal inhabitants the Commission appointing Lord Dorchester Governor-in-Chief of Upper and Lower Canada[1], and the Commission appointing himself to be Lieutenant Governor of Upper Canada[2]; the foundation documents of these Provinces.

The personnel of the first Government, Legislative Council, and executive officials was as follows:—

Lieutenant Governor: John Graves Simcoe.

Secretary: Edward B. Littlehales.

Executive Council: William Osgoode, Chief Justice; William Robertson[3], Alexander Grant, Peter Russell and James Baby.

Clerk: John Small, and E. B. Littlehales, pro tem.; James Clark.

Secretary and Registrar of the Province: William Jarvis.

Legislative Council: William Osgoode, C.J., James Baby, Richard Duncan, William Robertson[3], Robert Hamilton, Richard Cartwright, Jun., John Munro, Alexander Grant, Peter Russell.

Clerk of the Crown, and Court of Common Pleas: David Burns.

Sheriffs: Richard Pollard, Alexander McDonell.

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[1] See Ontario Archives IV., pp. 161-169.

[2] See Appendix No. 1 to this volume.

[3] William Robertson had settled at Detroit in 1782 and was prominent in affairs. At the time of his appointment he was in England and did not return to Canada. Æneas Shaw was appointed in his place (p. 72).

Speaker of the House of Assembly: John McDonnell.
Clerk: Angus McDonell.
Surveyor-General of Lands: David William Smith.
Attorney-General: John White.

In addition to the Minutes of the Executive Council this Report contains a few documents of special interest. For instance, on pages 1-7 will be found the Royal Instructions given to Simcoe on his appointment, in which the functions of the Executive Council are set forth. These Instructions were not available when the State documents published in the Fourth Report of the Ontario Archives (1906) were being collected, and so far as is presently known to the writer they are published herein for the first time. The late Avern Pardoe, Parliamentary Librarian of Ontario, made a search for this document in 1906, with the assistance of the Dominion Archivist and the Under-Secretary of State.[1]

The claim of the Reverend John Stuart to the exclusive right of granting marriage licenses, letters of administration, and probates of wills; under the authority of a Commission from the Bishop of Nova Scotia, throws a side-light on ecclesiastical relationships and jurisdiction. Of interest also are such records as those dealing with the authorization of local fairs, Indian claims to certain lands, the details of sundry public accounts, and tables of official fees, the personnel of the new local Land Boards, the establishment of a Supreme Court of Judicature for the Province, the Bill for which was prepared by Chief Justice Osgoode, a memorial for lots on which to build a Presbyterian Church and School House at Newark, various references to loyalist and military services of public as well as of genealogical value, and certain collects and prayers for the Lieutenant Governor and Legislature in Session prepared by the Bishop of Nova Scotia.

In the matter of settlement three periods are noticeable: that in which the Council at Quebec and the District Land Boards operated, the proceedings of which are given in last year's Report, the period of Simcoe's regime—distinct in itself, meriting careful study, and the period of the Administrations immediately following, noted for being rather less restrained in disposing of the virgin resources of the Province.

The official relationship between Dorchester and Simcoe, into which serious friction entered, is scarcely more than hinted at in these particular records; yet to anyone familiar with the correspondence, the diverse influences at work are even here significantly discernible. Simcoe held laboriously to his post until his request for leave of absence was granted, his characteristic diligence undiminished, though undoubtedly the state of his health demanded temporary relief, and most probably was the actual cause of his desire for a change of scene.

Simcoe's Commission of Appointment as Lieutenant Governor, his Proclamations regarding land settlement and creating of the first sixteen counties of Upper Canada; Dorchester's Proclamation forming the original districts; and a copy of early instructions to land surveyors, will be found among the Appendices.

From these records a vivid glimpse is obtained of the tortuous processes of settlement, and information essential to the historian and special investigator pursuing the work of historical research. Indebtedness is gratefully acknowledged to Dr. Doughty, Dominion Archivist, for his ever ready assistance; and for the correspondence relating to Simcoe's arrival at Quebec, to the Ontario Historical Society, in whose valuable volume of Simcoe Papers, edited by Brig.-General E. A. Cruickshank, these letters appear.

Alexander Fraser.

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[1] Ont. Hist. Soc. Papers and Records, Vol. VII., pp. 10-11.

GRANTS OF CROWN LANDS, ETC., IN UPPER CANADA
1792–1796

The following documents are transcripts from the originals of the official Minutes of Council, chiefly concerning Crown Lands, Accounts, and other business transacted by the Executive Council of the Province of Upper Canada from 1792 to 1796.

Kingston, 8th July, 1792.

His Excellency, JOHN GRAVES SIMCOE, Esq., Lieutenant Governor of the Province of Upper Canada, Colonel Commanding the Forces in the said Province, &c, having appointed the Protestant Church as a suitable place for the reading and publishing of His Majesty's Commissions, he accordingly repaired thither attended by the Honourable WILLIAM OSGOODE, Chief Justice, the Honourable JAMES BABY and the Honourable PETER RUSSELL, together with the Magistrates and principal inhabitants, when the said Commission appointing His Excellency (GUY) LORD DORCHESTER, Captain General and Governor-in-Chief, &c, of Upper and Lower Canada, and also the Commission appointing the said JOHN GRAVES SIMCOE, Lieutenant Governor of the Province of Upper Canada, were solemnly read and published.

His Excellency then took the oaths mentioned in An Act of Parliament passed in the first year of His late Majesty King George, as altered and explained by an Act passed in the 6th year of the Reign of His present Majesty, and also made and subscribed the Declaration mentioned in an Act of Parliament made in the twenty-fifth year of the Reign of Charles II, for preventing the danger which may happen from Popish recusants. The oath for the due execution of his place and trust was administered to him by Hon. W. Osgoode, Chief Justice, and he took the oath required by an Act passed in the 7th and 8th years of the Reign of King William III, to be taken by Governors of Plantations to do their utmost that the laws relating to the plantations be duly observed.

Monday, 9th July, 1792.

At the Council Chamber, Kingston.

Present: His Excellency J. G. Simcoe, Lieutenant Governor, &c; The Honourables William Osgoode, Chief Justice; James Baby and Peter Russell.

The Honourables William Osgoode, Chief Justice, and Peter Russell took the Oaths of Allegiance, Supremacy and Abjuration, and subscribed the Test, and also took the oath for the due execution of their office as Executive Councillors.

Hon. James Baby took the oath specified in an Act passed in the 14th year of His present Majesty, and also the oath for the due execution of his office. And the said William Osgoode, Chief Justice; James Baby and Peter Russell were severally admitted of the Council and took their seats accordingly.

His Excellency having been pleased to nominate and appoint Edward Baker Littlehales, Esq., as Clerk of the Council, pro tempore, he took the usual oaths and subscribed the Test.

William Jarvis, Esq., Secretary and Registrar of the Province, took the usual oaths and subscribed the Test.

The Instructions to the Executive Council were read and ordered to be copied in the Minute Book, as follows:

1st. You are, with all due solemnity, before the members of the Executive Council, to cause our said Commission to be read and published, which being done, you shall then take, and also administer to each of the members of our said Executive Council, the oaths mentioned in an Act passed in the first year of His late Majesty King George I, Intituled an Act for the further security of His Majesty's Person and Government, and the succession of the Crown in the heirs of the late Princess Sophia, being Protestants, and for extinguishing the hopes of the pretended Prince of Wales and his open and secret abettors, as altered and explained by an Act passed in the 6th year of our Reign Intituled an Act for altering the Oath of Abjuration and the Assurance, and for amending so much of an Act of the seventh year of Her late Majesty Queen Anne Intituled an Act for the Improvement of the Union of the two Kingdoms, as after the time therein limited, which requires the delivery of certain lists therein mentioned to persons indicted for high treason and also to make and subscribe and cause the members of the said Executive Council to make and subscribe the Declaration mentioned in an Act of Parliament made in the 25th year of the Reign of King Charles II, Intituled an Act for preventing the danger which may happen from Popish recusants. And you and every one of them are likewise to take an oath, for the due execution of your and their places and trust with regard to your and their equal and impartial administration of justice; and you are also to take the oath required by an Act passed in the 7th and 8th years of the Reign of King William III to be taken by Governors of Plantations to do their utmost that the laws relating to the Plantations be duly observed.

You shall also administer, or cause to be administered, the oaths appointed in the aforesaid recited Acts, to all persons except as hereafter mentioned, that shall be appointed to hold, or exercise any office, place of trust, or profit in our said Province previous to their entering on the execution of the duties of such office and you shall also cause them to make and subscribe the Declaration mentioned in the aforesaid Act of the 25th year of the Reign of King Charles II. But in cases where any such office, place of trust or profit in our said Province of Upper Canada shall be conferred on any of our subjects who may profess the religion of the Church of Rome, you shall so often as any such person shall, or may be admitted into any such office, place of trust, or profit, administer or cause to be administered to him the oath prescribed in and by an Act of Parliament passed in the 14th year of our Reign Intituled an Act for making more effectual provision for the Province of Quebec in North America, and also the usual oath for the execution of such office, place of trust, or profit in lieu of all other tests and oaths whatsoever.

WHEREAS we have thought that there should be an Executive Council for assisting you, or our Lieutenant Governor, or person administering the Government of our said Province of Upper Canada for the time being; we do hereby by these presents nominate and appoint the undermentioned persons to be of the Executive Council of our said Province, viz: William Osgoode, William Robertson, James Baby, Alexander Grant and Peter Russell.

And whereas by an Ordnance passed in the Province of Quebec, the Governor and Council of the said Province were constituted a Court of Civil Jurisdiction for hearing and determining appeals in certain cases therein specified, and whereas by an Act passed in the present year of our reign, it is declared that the Governor, Lieutenant Governor, or person administering the Government of the said Province together with such Executive Council shall be a Court of Civil Jurisdiction within our said Province for hearing and determining appeals within the same in the like cases, and in the like manner and form and subject to such appeal therefrom, as such appeals might have been before the passing of the above recited Act have been heard and determined by the Governor and Council of Quebec. In order therefore to carry the said Act into execution, our will and pleasure is that you do in all civil causes, on application being made to you for that purpose, permit and allow appeals from any of the courts of common law in our said Province unto you and the Executive Council of the Province of Upper Canada, in manner prescribed by the above mentioned Act, and you are for that purpose to issue a writ as nearly in the accustomed manner before the passing of the above-mentioned Act in respect of such appeals as the case will admit, returnable before yourself and the Executive Council of the Province of Upper Canada who are to proceed to hear and determine such appeal wherein such of the said Executive Council, as shall be at that time judges of the court from whence such appeal shall be so made to you, our Captain General, and to our said Executive Council as aforesaid, shall not be admitted to vote upon the said appeal but they may nevertheless be present at the hearing thereof, to give the reasons of the judgment given by them in the causes wherein such appeals shall be made, PROVIDED nevertheless that in all such appeals the sum, or value appealed for, do exceed the sum of three hundred pounds sterling and that security be first duly given by the appellant to answer such charges as shall be awarded in case the first sentence be affirmed and if either party shall not rest satisfied with the judgment of you and such Executive Council, as aforesaid, our will and pleasure is that they may then appeal unto us in our Privy Council, provided the sum or value so appealed for unto us, do exceed five hundred pounds sterling and that such appeal be made within fourteen days after sentence, and good security be given by the appellant that he will effectually prosecute the same, and answer the condemnation, as also pay such costs and damages as shall be awarded by us in case the sentence of you and the Executive Council be affirmed, provided nevertheless where the matter in question relates to the taking or demanding any duty payable to us or to any fee of office or annual rents or other such like matter, or thing, where the rights in future may be bound; in all such cases you and the said Executive Council are to admit an appeal to us in our Privy Council though the immediate sum or value appealed for be of a less value; and it is our further will and pleasure that in all cases whereby your Instructions you are to admit appeals unto us in our Privy Council, execution shall be suspended till the final determination of such appeal, unless good and sufficient security be given by the appellee to make ample restitution of all that the appellant shall have lost by means of such decree, or judgment, in case upon the determination of such appeal, such decree, or judgment should be reversed and restitution ordered to the appellant. You and our Executive Council are also to permit appeals unto us in our Privy Council in all cases of fines imposed for misdemeanors provided the fines so imposed amount to or exceed the sum of one hundred pounds sterling, the appellant first giving good security that he will effectually prosecute the same, and answer the condemnation, if the sentence by which such fine was imposed in your Government shall be confirmed.

And WHEREAS we are sensible that effectual care ought to be taken to oblige the members of our Executive Council to a due attendance, it is our will and pleasure in order to prevent the many inconveniences which may happen for want of a quorum of the council to transact business as occasion may require, that if any members of our said Executive Council residing in our said Province shall hereafter wilfully absent themselves from the Province, and continue absent above the space of six months together without leave from you first obtained under your hand and seal, or shall remain absent for the space of one year without our leave given them under our royal signature, their places in the Executive Council shall immediately thereupon become void. And we do hereby will and require you, that this our royal pleasure be signified to the several members of our said Executive Council, and that it be entered in the Council Books of the said Province as a standing rule.

And to the end that our said Executive Council may be assisting you in all affairs relating to our service, you are to communicate to them, such and so many of these our instructions wherein their advice is mentioned to be requisite, and likewise all such others from time to time, as you shall find convenient for our service to be imparted to them.

You are also to permit the members of our said Executive Council to have and enjoy freedom of debate, and vote in all affairs of public concern which may be debated in the said Executive Council.

You are to give warrants under your hand for the issuing of public monies for all public services, and we do particularly require you to take care that regular accounts of all receipts of payments of public monies be duly kept, that the same from time to time be audited by our Executive Council, and that copies thereof attested by you be transmitted every half year or oftener if there should be occasion to our Commissioners of our Treasury or to our High Treasurer, for the time being, and duplicates thereof by the next conveyance, in which accounts shall be specified every particular sum raised or disposed of, to the end that we may take such measures as we may deem necessary for the examination of the said accounts, and that we may be satisfied of the right and due application of the revenues of our said Province of Upper Canada, and with the probability of the increase or diminution of it under every head and article thereof.

You are not to suspend any of the members of our said Executive Council, or to suspend or displace any of the judges, justices, sheriffs, or other officers, or ministers within our said Province of Upper Canada, without good and sufficient cause, and in case of such suspension, or removal, you are forthwith to transmit your reasons for the same to one of our Principal Secretaries of State.

You shall take care with the advice and assistance of our Executive Council that such prisons as may at any time be necessary be erected, and that the same already created be kept in such condition as effectually to secure the prisoners, which now are, or may hereafter be confined therein.

And WHEREAS nothing can more effectually tend to the speedy settling of our said Province of Upper Canada than the security of the property of our subjects, and the advancement of our revenue, than the disposal of such lands as are our property upon reasonable terms, and the establishing a regular and proper method of proceeding with respect to the passing of grants of such lands, it is therefore our will and pleasure, that all and every person, and persons who shall apply for any grant, or grants of lands shall previous to their obtaining the same make it appear that they are in a condition to cultivate and improve the same, and in case you shall upon consideration of the circumstances of the person, or persons applying for such grants think it advisable to pass the same, you are in such case to cause a warrant to be drawn up directed to the Surveyor General, or other officers, empowering him, or them, to make a faithful and exact survey of the lands so petitioned for and to return the said warrant within six months at farthest from the date thereof, with a plot or description of the lands so surveyed thereunto annexed, and when the warrant shall be so returned by the said surveyor or other proper officer the grant shall be made out in due form, and the terms and conditions required by these our Instructions be particularly and expressly mentioned therein. And it is our will and pleasure that the said grants shall be registered within six months from the date thereof in the Register's office and a docket thereof be also entered in our Auditor's office, copies of all which entries shall be returned regularly by the proper officer to our Commissioners of our Treasury.

And for the further encouragement of our subjects it is our will and pleasure that the lands to be granted by you as aforesaid shall be laid out in townships and that each inland township shall, as nearly as circumstances shall admit, consist of ten miles square, and such as shall be situated upon a navigable river, or water, shall have a front of nine miles, and be twelve miles in depth, and shall be sub-divided in such manner, as may be found most advisable for the accommodation of the settlers, and for making the several reservations for public uses, and particularly for the support of the protestant clergy agreeably to the above recited Act passed in the present year of our reign.

And WHEREAS great inconveniences have heretofore arisen in many of the Colonies in America from the granting of excessive quantities of land to particular persons who have never cultivated or settled the same, and have thereby prevented others, more industrious, from improving such lands, in order therefore to prevent the like inconveniences in future, it is our will and pleasure that you observe the following directions and regulations in all grants to be made by you as aforesaid, viz.:—

That no town lot shall be granted to any one person being master or mistress of a family in any township to be laid out as aforesaid, which shall contain more than one acre of land.

That no park lot shall be granted to any one person being master or mistress of a family in any township to be laid out which shall contain more than twenty-four acres.

That no farm lot shall be granted to any one person being master or mistress of a family in any township so to be laid out which shall contain more than two hundred acres.

It is our will and pleasure, and you are hereby allowed and permitted to grant unto every such person, or persons, such further quantity of lands as they may desire, not exceeding one thousand acres over and above what may have heretofore been granted to them, and in all grants of land to be made by you, as aforesaid, you are to take care that due regard be had to the quality and comparative value of the different parts of land comprised within any township, so that each grantee may have as nearly as may be a proportionable quantity of lands of such different quality and comparative value, as likewise that the breadth of each tract of land to be hereafter granted, be one-third of the length of such tract, and that the length of such tract do not extend along the banks of any river, but into the main land, that thereby the said grantees may have each a convenient share of what accommodation the said river may afford for navigation, or otherwise.

And as a further encouragement to our subjects who shall become settlers as aforesaid, it is our will and pleasure that the said townships, and the respective allotments within the same, together with the lands to be reserved as aforesaid, shall be run and laid out by our Surveyor General of Lands for the said Province, or some skilful person authorized by him for that purpose. That surveys together with the warrants and grants for the respective allotments shall be made out for, and delivered to, the several grantees free of any expense or fees whatsoever, other than such as may be payable to the different officers according to the table of fees to be established upon grants of land made in the said Province.

And in order to prevent any person disaffected to us and our Government, from becoming settlers in our said Province of Upper Canada, it is our will and pleasure, that no warrants for surveying lands be granted by you, or the Lieutenant Governor, or person administering the government for the time being, unless the person, or persons applying for the same, do at the time of making such application, besides taking the usual oaths directed by law, also make and subscribe the following declaration, in your, or his, presence, or in the presence of such person, or persons, as shall by you, or him, be appointed for that purpose, viz.: I, A. B., do promise and declare, that I will maintain and defend to the utmost of my power, the authority of the King in his Parliament as the supreme Legislature of this Province.

WHEREAS the reserving such bodies of land within our Province of Upper Canada, where there are considerable growths of timber fit for the use of our Royal Navy is a matter of the utmost importance to our service, it is our will and pleasure that no grants whatever be made of lands within any district, or tract of our said Province of Upper Canada, until our Surveyor General of Woods, or his deputy lawfully appointed, shall have surveyed the same, and marked out as reservations to us, our heirs, and successors, such parts thereof as shall be found to contain any considerable growth of masting or other timber fit for the use of our Royal Navy, and more especially upon the rivers. And you are hereby instructed to direct our Surveyor General of Lands in our said Province from time to time with all due diligence to complete the surveys, and mark out the reservations as aforesaid, in the most convenient parts of our said Province, and you are from time to time to report the number, extent and situation of such reservations, and you are further to direct our Surveyor General not to certify any plots of land ordered and surveyed for any person, or persons, whatever, in order that grants may be made out for the same, until it shall appear to him by a certificate under the hand of our said Surveyor of Woods, or his deputy, that the land so to be granted is not part of or included in any district marked out as a reservation for us, our heirs, and successors as aforesaid, for the purpose hereinbefore mentioned; and in order to prevent any deceit or fraud from being committed by the persons applying for lands in this respect, it is our will and pleasure that in all grants to be hereafter made for lands, within our said Province of Upper Canada, the following proviso and exception be inserted, viz.: and provided also that no part of the parcel or tract of land, hereby granted to the said............ and his heirs, be within any reservation heretofore made, and marked for us, our heirs and successors by our Surveyor General of Woods, or his lawful deputy; in which case this, our grant for such part of the land hereby given and granted to the said..............and his heirs for ever as aforesaid, and which shall upon a survey thereof being made, be found within any such reservations, shall be null and void and of none effect, anything herein contained to the contrary notwithstanding.

And WHEREAS it is necessary that all persons who may be desirous of settling in our said Province, should be fully informed of the terms and conditions upon which lands will be granted within our said Province of Upper Canada,in manner prescribed in and by the said Act passed in the present year of our reign, you are therefore as soon as possible to cause a publication to be made by proclamtion, or otherwise, as you in your discretion shall think most advisable of the said terms and conditions respecting the granting of lands; in which proclamation it may be expedient to add some short description of the natural advantages of the soil and climate and its peculiar conveniences for trade and navigation.

And it is our further will and pleasure that all the foregoing Instructions to you, as well as any which you may hereafter receive, relative to the passing grants of lands in conformity to the said Act passed in the present year of our reign, be entered upon record for the information and satisfaction of all parties whatever, that may be concerned therein.

And WHEREAS it hath been represented unto us, that several parts of our Province of Upper Canada have been found to abound with coals, it is our will and pleasure that in all grants of land to be made by you, a clause be inserted reserving to us, our heirs and successors, all coals, and also mines of gold, silver, copper and tin, iron and lead which shall be discovered upon such lands.

If anything shall happen which may be of advantage or security to our Province under your Government which is not herein, or by your Commission provided for, we do hereby allow unto you, with the advice and consent of our said Executive Council, to take order for the present therein, provided nevertheless that what shall be done be not repugnant to the said Acts passed in the 14th and present year of our reign, giving unto us by one of our Principal Secretaries of State speedy notice thereof, that you may receive our ratifications, if we shall approve the same, provided always that you do not by colour of any power or authority hereby given you, commence or declare war without our knowledge, and particular commands therein, except it be for the purpose of preventing or repelling hostilities, or unavoidable emergencies, wherein the consent of our Executive Council shall be had, and speedy notice given thereof to us, by one of our Principal Secretaries of State.

And WHEREAS we have thought fit by our Commission to direct that in case of your death, or absence from our said Province, and in case there be at that time no person commissionated, or appointed by us, to be our Lieutenant Governor, the eldest Executive Councillor, who shall be at the time of your death, or absence, residing within our said Province of Upper Canada, subject to such other nomination and appointment by you under the Great Seal of our said Province, as in our said Commission is in that behalf mentioned, shall take upon him the administration of the government and execute our said Commission and Instructions and the several powers and authorities therein contained in the manner thereby directed. It is nevertheless our express will and pleasure that, in such case the said President shall forbear to assent to any Acts but what are immediately necessary for the welfare of our said Province, without our particular order for that purpose, and that he shall not take upon him to dissolve the Assembly then in being, nor to remove or suspend any of the members of our said Executive Council, or any judges, justices of the peace, or other officers, civil or military, without the advice and consent of the majority of the said Executive Council. And the said President is by the first opportunities to transmit to us by one of our Principal Secretaries of State the reasons for such alterations signed by him and our Council. And our will and pleasure is that the above Instruction with respect to such President shall also be equally observed by and binding upon such other Executive Councillor, as may be nominated and appointed by you under the Great Seal of our said Province by virtue of our said Commission in that behalf.

Resolved that a Proclamation be issued for the purpose of the continuation of offices and employments of judges, justices and all other civil officers in the Province.

Tuesday, 10th July, 1792.

At the Council Chamber, Kingston.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; Honourables William Osgoode, Chief Justice; James Baby and Peter Russell.

The several Militia Returns having been laid before the Council, by order of His Excellency, and the deputy surveyors for the different districts attending, the Council proceeded to divide the Province into counties, in order to establish as equal a representation as possible and as the nature of circumstances would permit.

Wednesday, 11th July, 1792.

At the Council Chamber, Kingston.

Present: His Excellency, J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; James Baby and Peter Russell.

The Hon. Alexander Grant made his appearance and the necessary oaths being administered to him, he was admitted a member of His Majesty's Executive Council of this Province and took his seat.

The Council resumed the business of the division of the Province into counties, and proceeded therein.

Thursday, 12th July, 1792.

At the Council Chamber, Kingston.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; James Baby, Alexander Grant and Peter Russell.

The Council continued the business of the division of the Province into counties, and proceeded therein.

Friday, 13th July, 1792.

At the Council Chamber, Kingston.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; James Baby, Alexander Grant and Peter Russell.

The Council continued the business of the division of the Province into counties and proceeded therein.

Saturday, 14th July, 1792.

At the Council Chamber, Kingston.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; James Baby, Alexander Grant and Peter Russell.

The Council continued the business of the division of the Province into counties, and proceeded therein.

Sunday, 15th July, 1792.

At the Council Chamber, Kingston.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; James Baby, Alexander Grant and Peter Russell.

The Council proceeded in, and concluded the business of the division of the Province into counties, and His Excellency having appointed the limits thereof, and also having declared and appointed the number of representatives to be chosen by each county, directed a Proclamation to be issued to carry the same into effect, and he also directed a Proclamation to issue under the Great Seal of the Province to call together a Legislative Council and Assembly.

Monday, 16th July, 1792.

At the Council Chamber, Kingston.

Present: His Excellency J. G. Simcoe, Lieutennat Governor; The Honourables William Osgoode, Chief Justice; James Baby, Alexander Grant and Peter Russell.

His Excellency directed Writs of Summons to the Legislative Council to be issued under the Great Seal of the Province, and directed to the following persons, viz.:—William Osgoode, Chief Justice; James Baby, Richard Duncan, William Robertson, Robert Hamilton, Richard Cartwright, Junior, John Munro, Alexander Grant, Peter Russell.

David Burns, Esq., appeared, and took the necessary oaths, as Clerk of the Crown and Court of Common Pleas for this Province.

Richard Pollard, Esq., appeared, and took the necessary oaths, as one of the Sheriffs for this Province.

Alexander McDonell, Esq., appeared, and took the oath specified in an Act passed in the 14th year of His present Majesty; and also the oath for the due execution of his office, as one of the Sheriffs of this Province.

Tuesday, 17th July, 1792.

At the Council Chamber, Kingston.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; James Baby, Alexander Grant and Peter Russell.

His Excellency having laid before the Council the proceedings of several Land Boards within the Province, and having directed their consideration to certain propositions made by the Land Board of Hesse, it was resolved: That a copy of a Proclamation of His Excellency's dated February 7th, 1792, relative to the lands of the Crown, and another Proclamation of the 9th of July, 1792, be circulated to each of the Boards within the Province and that a letter should be written to the Land Board of Hesse in answer to a letter dated Detroit, 30th of April, 1792.

Wednesday, 18th July, 1792.

At the Council Chamber, Kingston.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; James Baby, Alexander Grant and Peter Russell.

His Excellency resumed the business of the Land Board Department and ordered several petitions for grants of land to be read and taken into consideration, viz.: John Baker, A. and H. Spencer, and their several associates.

Friday, 20th July, 1792.

At the Council Chamber, Kingston.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; James Baby, Alexander Grant and Peter Russell.

A petition was read from Peter Smith, merchant of the Town of Kingston, praying for leave to erect a wharf 36 feet from the beach outwards, by the whole front of his lot, which measures 132 feet, and the said Peter Smith further prays for permission to build a storehouse, 36 by 28 feet, and a quay (in consequence of the shallowness of the water) of 80 feet in length by 15 feet in breadth. The said petition was taken into consideration and leave granted by His Excellency under certain reservations, limitations and restrictions.

Saturday, 21st July, 1792.

At the Council Chamber, Kingston.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; James Baby and Peter Russell.

The Council assembled for the purpose of issuing a Proclamation to prevent any doubts that might arise respecting a Proclamation of His Excellency's of the 9th of July last, relative to the continuation of offices and employments, judicial and ministerial, &c., in the Province, and His Excellency ordered the same to be issued accordingly.

Saturday, 29th September, 1792.

At the Council Chamber, Navy Hall, County of Lincoln.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; Alexander Grant and Peter Russell.

His Excellency observed that he had assembled the Executive Council principally for the purpose of investigating the location, &c., of lands in the District of Nassau.

John Butler, Esq., (late Lieut.-Colonel of Rangers) attended and mentioned having granted lands in the aforesaid district under the authority of General Haldimand, formerly Governor of the Province of Quebec.

Walter Butler Shehan, Clerk of the Land Board of the above mentioned district, attended and delivered the Register Book and six other original documents concerning the Land-granting Department of Nassau; which were ordered by His Excellency to be laid on the table for the inspection of the honourable members.

The following petition, accompanied with a Commission from the Right Reverend, the Bishop of Nova Scotia, appointing the Reverend John Stuart, Ecclesiastical Commissary, was presented and read;

To His Excellency, John Graves Simcoe, Lieutenant Governor and Commander in Chief in the Province of Upper Canada and its Dependencies, (in Council),

The Memorial of the Reverend John Stuart humbly sheweth that your memorialist was appointed Ecclesiastical Commissary by a Commission from the Right Reverend the Bishop of Nova Scotia; by virtue of which your memorialist humbly conceives that the right of granting matrimonial licenses is solely vested in him.

Your memorialist submits to Your Excellency's consideration (in Council) whether he is sufficiently authorized by the Commission which accompanies this memorial to grant matrimonial licenses? Or whether it will be expedient for him to apply to the Bishop for more special authority for that purpose? And your memorialist shall, as in duty bound, ever pray,

NIAGARA, U.C. SEPT. 24, 1792. (Signed) JOHN STUART.

Reference was had to His Majesty's Private Instructions whereby it appears as follows,

(EXTRACT):—WHEREAS we did by our Commission, under the Great Seal of Great Britain bearing date the 1st day of August, 1787, appoint the Right Reverend Father in God, Charles Inglis, Doctor in Divinity, to be Bishop of the Province of Nova Scotia, and thereby give to him, and his successors in the said See, jurisdiction, spiritual and ecclesiastical, in and throughout the said Province of Nova Scotia, and its dependencies, according to the laws and canons of the Church of England, which are lawfully made and received in England, in the several causes and matters particularly expressed and set forth in the said Commission and no other; AND WHEREAS by another Commission, we did also give and grant to the said Bishop of Nova Scotia full power and authority by himself, or his sufficient commissary, or commissaries, to exercise the like spiritual and ecclesiastical jurisdiction within the Provinces of Quebec, of New Brunswick and the Islands of St. John, Cape Breton and Newfoundland, as is set forth in the said Commission, we do hereby order and enjoin you that you do give all fit support and countenance to the said Bishop in the exercise of his jurisdiction, spiritual and ecclesiastical, according to the laws of this realm, and the laws to be established in our Province of Upper Canada, and to the tenor of the said Commissions: It is nevertheless our will and pleasure, to reserve to you the granting of licenses for marriages, letters of administration and probates of wills, as heretofore exercised by you and your predecessors and also to reserve to you, and to all others to whom it may lawfully belong, the patronage and right of presentation to benefices; but it is our will and pleasure that the person so presented shall be instituted by the Bishop, or his Commissary duly authorized by him, as directed by our said Commission.

Resolved by His Excellency and the Honourable the Executive Council, that the right of granting matrimonial licenses is not vested in the Reverend John Stuart, and that it is inexpedient for him to make application to the Bishop of Nova Scotia for more special authority.

Saturday, 6th October, 1792.

At the Council Chamber in Navy Hall.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; Alexander Grant and Peter Russell.

His Excellency directed several petitions that had been presented to him be laid before the board, as follows:—

A petition from Abel and Hazelton Spencer, and their associates, praying for the Township of Haldimand. Ordered that the prayer of this petition be granted.

A petition from Jacob Watson, Stephen Gorham, John Baker, Ebenezer Cooley and their several associates, praying for four townships. Ordered that the prayer of this petition be granted for the Township of Murray, only.

A petition from Jonathan Walton, Elias Smith and Abraham Walton, with their associates, praying for a township[1]. Ordered that the prayer of this petition be granted for the Township of Hope.

A petition from Captain Gilchrist of Vermont, with very numerous associates praying for a township. Ordered that the above petition stand over for further consideration.

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[1] Land Book E, 301.

A petition from Lemuel Blanchard, and several associates, praying for a township. Ordered that the above petition stand over for further consideration.

A petition from Moses Goddard, and several associates, praying for a township. Ordered that the above petition stand over for further consideration.

A petition from Marshall Jones, and several associates, praying for the Township of Hamilton. Ordered that the prayer of this petition be granted.

A petition from George Hamilton[1], and several associates, praying for a township on the River Rideau. Ordered that the prayer of this petition be granted.

A petition from Israel Jones, David Noble, H. Van Shaack, Charles Seldon, William Towner, and Elias Jones, and their associates praying for a township on the River Rideau. Ordered that the prayer of this petition be granted.

(Two of the Deputy Surveyors attended, Alexander Aitkin and William Chewett.)

A petition from Mrs. Mary Brandt praying for leave to inclose part of the common, or waste land, at Cataraqui, and to give an equivalent quantity of an enclosure in lieu of it. Ordered that the Deputy Surveyor, Alexander Aitkin, examine and survey the same and report accordingly.

A petition from Thomas Markland, merchant, praying for leave to erect a wharf and stores, etc., at Kingston, in front of his town lot, &c. Ordered that the petitioner may have permission to build a wharf upon the beach in front of his town lot, extending an equal number of feet in the said lot, and to erect stores on the said wharf, but upon no consideration to erect stores, or any other building, on the main land.

A petition from Robert McAuley, merchant, praying for leave to erect a wharf and store at Kingston, in front of his town lot. Ordered that the petitioner may have permission to build a wharf upon the beach in the front of his town lot extending an equal number of feet in the said lot, and to erect stores on the said wharf, but upon no consideration to erect stores or any other building on the main land.

A petition from Donell McDonell, merchant, praying for leave to erect a wharf at Kingston, in front of his town lot. Ordered that the petitioner may have permission to build a wharf upon the beach, in front of his town lot, extending an equal number of feet in the said lot, and to erect stores on the said wharf, but not to erect stores, or any other building, on the main land.

A petition from Peter Sharp, and constituents, praying for a township. Ordered that the above petition stand over for further consideration.

Saturday, 13th October, 1792.

At the Council Chamber, Navy Hall.

Present: His Excellency, J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; Alexander Grant and Peter Russell.

His Excellency informed the Board he had received an account of the arrival of several loyalist families, and that he was anxious to settle them as soon as possible. Some papers relative to the loyalists were produced. Bensley Peters, one of the principal loyalists, attended in behalf of himself and the majority to express a wish to settle at Toronto.

The Deputy Surveyors attended. Ordered that the Deputy Surveyor Alexander Aitkin examine and make a proper survey of lands at Toronto for Bensley Peters, and the other associated loyalists, and report accordingly.

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[1] Book F, Petition of Edward Hamilton, 46.

Alexander Wright attended and produced three several petitions, signed by numerous persons and requesting three townships, one on behalf of himself, and very many associates praying for a township to the northward of Kingston.

One other, signed by Samuel McRay, John Auston, &c., praying for a township on the River Rideau adjoining Stevens' lot, if not disposed of. The third signed by Samuel Stafford, Paul Warnock, praying for a township on the River Rideau, adjoining the former. Ordered that the Deputy Surveyors examine and survey the same, and report accordingly.

Monday, 15th October, 1792.

At the Council Chamber, Navy Hall.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; Alexander Grant and Peter Russell. The Deputy Surveyors attended.

Different plans of the reservations of two-seventh parts of all future grants of townships were produced and laid before the Board, one of which plans was selected and approved of. Ordered that all future reservations be made conformably to the said plan.

Tuesday, 16th October, 1792.

At the Council Chamber, Navy Hall.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; Alexander Grant and Peter Russell.

The following memorials and petitions previously presented to His Excellency were laid before the Board and read. The memorial of Lieut. Angus McDonell, late 71st Regiment, praying for an additional quantity of lands of one thousand acres. Ordered that this petition stand over for further consideration, till the petitioner specifies the place and situation.

A petition from Thomas Ridout praying for 1,000 acres of land situated near Toronto. Ordered that this petitioner receive four hundred acres in the neighbourhood of Toronto, and a town lot at Toronto.

The memorial of Captain AEneas Shaw, late Queen's Rangers, praying for his extra quantum of land as a reduced Captain, amounting to two thousand, two hundred and fifty acres. Ordered that this memorial stand over for further consideration, as not containing a specification of place or situation.

The memorial of Captain John McGill of the late Queen's Rangers, praying for the additional quantity of land he conceives himself entitled to as a reduced Captain, amounting to two thousand, four hundred and fifty acres. Ordered that this memorial stand over for further consideration as not containing a specification of place or situation.

A petition from Charles Frazer praying for lands. Ordered that this petition be laid aside as perfectly inexplicit.

The memorial of Lieut. Allan McNabb, late Queen's Rangers, praying for lands in Upper Canada as a reduced Lieutenant. Ordered that this memorial stand over for further consideration as not containing specification of place, or situation, or lands prayed for.

The memorial of James Rankin, praying for five thousand acres as heir to his late father, Lieut.-Colonel William Rankin. Ordered that the prayer of this memorial be granted when properly surveyed.

The memorial of Alexander McDonell praying for a grant of lands, as a reduced officer in the late Colonel Butler's Rangers. Ordered that this memorial stand over for further consideration, as not containing a specification of lands prayed for.

Wednesday, 17th October, 1792.

At the Council Chamber, Navy Hall.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; Alexander Grant and Peter Russell.

His Excellency called the attention of the Council to the case of Sally Ainse, an Indian woman, which stated that she had been deprived of her lands on the River La Tranche, after having considerably improved the same. (Sally Ainse attended.)

Reference was had to the proceedings and documents of the Land-granting Department of the late District of Hesse; and especially to Report K, which together with other letters from the same Board on the same subject clearly evinced that the above Sally Ainse was entitled to have the prayer of her petition granted.

Resolved that Sally Ainse be invested with a certificate for her present claims on the River La Tranche, being eight lots in the center of the first township, of the first concession on the north side of that river, so as to comprehend her improvements on two of the said lots by extending the front, in order to take in the said improvements by boundaries parallel to the side lines of the lots, at present reported to be the course of the side lines of the lands on the River La Tranche.

The Council proceeded in the business of the Land Board Department in the late District of Hesse, the whole of Report K was read and the petitions of the trustees of Caldwell and Elliot, and of Pollard and Consors, submitted in that Report were taken into consideration and the following resolution passed which, together with the resolution respecting Sally Ainse as above mentioned, were ordered to be transmitted in a letter by the Clerk of the Council to the members of the Land Board of the late District of Hesse.

Resolved that the petition of the trustees of Caldwell and Elliot, and of Pollard and Consors, cannot be attended to as their claims are for lands usurped under Indian purchase, grant, or cession; and not binding in any respect whatever; on the contrary, the subject who presumes to claim right on such tenure is not only guilty of a misdemeanor, but acts in apparent defiance to all authority and repeated orders to the prevention of such traffic.

A petition from the same Report K from William La Motte (late Captain of the Detroit volunteers) was read, praying for two thousand acres on the River La Tranche. Ordered that this petition be laid aside till proper surveys are made.

The following petitions addressed to His Excellency (in Council) were read:—

The petition of Joel Stone, in behalf of himself and various constituents, praying for a township. Ordered that this petition stand over for further consideration, as not containing a specification of place.

The petition of Lieut. Archibald McDonell praying for his extra portion of lands consisting of fifteen hundred acres near the seat of government. Ordered that this petition stand over, not being sufficiently explicit.

The memorial of Henry Bethune Stark (late a Captain in His Majesty's 63rd Regiment of Foot) praying for lands. Ordered that the prayer of this memorial be granted when proper surveys are made.

The petition of Peter Roualt, alias Durasoir, praying for one hundred and fifty acres for himself and fifty acres for his wife. Ordered that the prayer of this petition be granted, but no place specified.

The petition of Thomas D'Arcy (late a Captain of the Associated Loyalists) praying for two thousand, two hundred acres in the rear of his present lot of eight hundred acres, on the south side of the Grand River. Ordered that the prayer of this petition be granted when the proper surveys are made.[1]

The petition of Edward Carscallen praying for two thousand acres for himself and son in the Township of Haldimand. Ordered that this petition be deferred.

The petition of John Chrysdale praying for two hundred acres for himself, and two hundred acres for his daughter, Elicia. Ordered that this petition be referred to the Land Board to know on what pretensions the petitioner claims, and the Board to report thereon.

The petition of Joseph Carnahan. Ordered that this petition be withdrawn as inadmissible.

The petition of Ensign Christopher Robinson (of the late Queen's Rangers) praying for the remainder of his lands as a reduced officer, having only drawn five and fifty acres. Ordered that the prayer of this petition be granted, but no specific place mentioned.

The memorial of Captain Peter Russell (of His Majesty's late Royal Garrison Battalion) praying for three thousand acres as a reduced Captain. Ordered that the prayer of this petition be granted, but no specific place mentioned.

The petition of John Bininger praying for a grant of lands. Ordered that this petition be referred to the Land Board, to know on what pretensions the petitioner claims, and the Board to report accordingly.

The petition of John Dilton praying for permission to build a house, stores, &c., at Kingston upon the ground opposite McAuley's. Ordered that this petition is inadmissible as the land prayed for is reserved for the use of His Majesty.

The memorial of James Molloy praying for lands in behalf of himself and seven children, on the north side of Lake Ontario. Ordered that the prayer of this petition be granted so far as relates to Molloy himself, but the place not quite sufficiently explicit; the children's and orphans' claims to lie over.

The petition of John Campbell praying for permission to retain his dwelling house being on the land reserved by Government at Niagara. Ordered that this petition be rejected, as no lands reserved for the purposes of fortification will be granted.

The petition of Gideon Vernon praying for lands as a reduced Captain of an Independent Company of Associated Loyalists. Ordered that the prayer of this petition be granted, but the place not specified.[2]

The petition of William Reynolds praying for his proportion of lands as a reduced Cornet. Ordered that presuming the petitioner can produce proof of his having the rank nominated in his petition, the prayer is granted, without any specification of place.

The memorial of Nicholas Wager, and associates, praying for a township at Toronto. Ordered that this petition stand out for consideration and enquiry.

The petition of Amos Ansby praying to be reinstated in his town lot at Cornwall (late New Johnstown). Ordered that this petition be referred to the Land Board, for them to report thereon.

The petition of Jeremiah Moore praying for a messuage and two hundred acres of land where he resides. Ordered that this petition be referred to the

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[1] Petition on 16th February, 1808. G. 461.

[2] Land Book H. 90, 1808.

Land Board, to know on what pretensions the petitioner claims and the Board to report accordingly.

The petition of Philip Pimber praying for a piece of ground of one hundred and thirty-two feet by sixty-six in front at Kingston near Markland's lot. Ordered that this petition be referred to the Land Board for their report thereon.

The memorial and petition of William Dixon, merchant, praying for a grant for his dwelling house, &c., built on the reserves of the Crown. Ordered that the petitioner's prayer cannot be granted as the Governor and Council have no authority to give any land reserved for the purposes of fortification.

The petition of Mathew Howell praying to keep possession of some land near lot No. 6 in the late District of Nassau, he having improved the same under permission of . . . Jones, Deputy Surveyor. Ordered that this petition be referred to Mr. Jones, Deputy Surveyor, for his report thereon.

The petition of William Ashley, praying for a certificate for a lot he had considerably improved. Ordered that this petition be referred to the Land Board for their report thereon.

The memorial of Ephraim Knapp, praying for an additional quantum of lands. Ordered that this memorial be referred to the Land Board for their report thereon.

The memorial of Neil McLean, Assistant Commissary General, praying for permission to locate three thousand acres in this Province. Ordered that the prayer of this petition is not cognizable under its present head, and must consequently be laid aside tho' His Excellency and the Honourable Land Committee are well inclined to listen to the prayer of the petitioner.

The petition of John Stevens praying for an additional quantity of lands. Ordered that this petition be referred to the Land Board for their report thereon.

The memorial of Samuel Trowbridge praying for lands in the late District of Nassau. Ordered that this petition be referred to the Land Board for their report thereon.

The petition of Elizabeth Engash praying for leave to retain a lot of land improved by her, but unlocated. Ordered that enquiry be made respecting this petition.

The petition of Jedediah Sanger, and numerous associates, praying for a township. Ordered that the prayer of this petition be granted, but the situation of the place not explicit.

The petition of David Jacocks praying for a lot of land. Ordered that this petition be referred to the Land Board for their report thereon.

The memorial of Christopher Gorgen praying for permission to build a shop near the hospital at Kingston. Ordered that the prayer of this memorial is inadmissible.

The petition of Allan Paterson praying for a grant of lands in consequence of his services during the last war. Ordered that the petitioner should apply as an individual wishing to settle.

Friday, 19th October, 1792.

At the Council Chamber, Navy Hall.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; Alexander Grant and Peter Russell.

His Excellency informed the Board that several persons had applied for grants of land on islands in this Province, and a petition was read from Samuel and Andrew Adams praying for Garden Island. Resolved that it is at present inexpedient to grant any island whatever, and that this petition be dismissed.

The petition of Mr. Easton, and associates, praying for a township. Ordered that this petition stand over as not containing any specification of place.

A petition of Nathaniel Lines (Indian interpreter) praying for a piece of ground opposite his town lot at Kingston. Resolved that it is inexpedient to grant the piece of land prayed for, and that the petition be dismissed.

The petition of the inhabitants of Chippawa Creek. Ordered that this petition stand over for further consideration.

The petition of Laurent Parent. Ordered that this petition be referred to the Land Board and that the Board report accordingly.

The petition of Ephraim Jones. Reference was had to the Minutes of the Land Committee of the Honourable Council of Lower Canada respecting the above petition. Resolved that the prayer of this petition cannot be granted as it does not appear two-sevenths of the land in the township where the petitioner's prayer extends, is reserved agreeably to Act of Parliament and Proclamation thereon.

The petitions of Major Smith and Lieutenant David William Smith, his son, jointly. The prayer of Major Smith's petition is for five thousand acres, as he proposes quitting His Majesty's Service, and becoming an inhabitant of Upper Canada. The petitioner further states that he held commissions in His Majesty's Fifth Regiment during a series of years, and that he served during the late war in America in a very ostensible military situation. The prayer of Lieutenant David William Smith's petition states that being a Member of the House of Assembly and intending to become an inhabitant of this Province, he prays for twelve hundred acres of land. Ordered that this joint petition be granted, but that at present it be laid aside as not containing a specification of place.

The petition of Lieutenant George Hill states that proposing to quit His Majesty's Service and wishing to become a settler in this Province, he prays for twelve hundred acres adjoining the lot prayed for by Major Smith. Ordered that the prayer of this petition be granted, but that it stand over as not containing a specification of place.

The memorial of William Holmes, Surgeon 5th Foot, praying for twelve hundred acres of land adjoining to the land prayed for by Major Smith, the memorialist having married in Upper Canada and wishing to become a settler of this Province. Ordered that the prayer of this memorial be granted, but that it stand over at present as not containing a specification of place.

Saturday, 20th October, 1792.

At the Council Chamber, Navy Hall.

Present: His Excellency J. Graves Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; Alexander Grant and Peter Russell.

His Excellency having ordered a plan of the Town of Cornwall (late New Johnstown) from a recent survey to be laid on the table, and upon inspection of the same it appearing that the space allotted for public streets and highways in and through the said town by lines drawn for that purpose has, in many instances, been encroached upon by buildings, fences and other trespasses to the manifest inconvenience of the inhabitants of the said town, as well as of all travellers passing through the same, and in open disobedience to the Rules and Regulations established at the laying out thereof:

Resolved by His Excellency in Council, that in order to check the encroachments of those who have been wilfully disobedient, as well as to preserve the regular appearance of the said town, and to provide for the future safety and convenience of its inhabitants and of all persons travelling through the same, the Clerk of the Council be directed to write immediately to the members of the Land Board of the District of Grenville and Leeds; recommending to them for the purposes aforesaid to order the surveyor of the district, or such other person as they may think proper to appoint, to give notice to such inhabitants of the said town as may have erected buildings, advanced fences, or have committed any trespass or nuisance upon His Majesty's Highway, as marked out by the lines drawn in the plan of the said town, to remove such nuisance within a given time, to be limited by the discretion of the members of the said Boards and further to give notice that they who shall persist in their disobedience of the said orders after such warning as aforesaid, shall be looked upon as wilful offenders and be prosecuted with the utmost rigour of the law.

Several petitions and memorials were presented and read in the following succession:—

The memorial of Jacob Ball, John Secord, Senior, Peter Ball and John Secord, Junior, praying for a title to their lands which they have considerably improved. Ordered that the prayer of this memorial be granted, and that the memorialists should procure a survey to be made of two hundred acres for Jacob Ball and two hundred acres for each of his sons, and that John Secord, Senior, do likewise procure a survey to be made of two hundred acres for himself and also of two hundred acres for his son, and that they produce the same to the Board.

The petition of John White, Esq., His Majesty's Attorney General of this Province, praying for twelve hundred acres near the Town of Kingston. Ordered that the prayer of this petition be granted when proper surveys are made.

The memorial of J. B. Bouchette, Commanding His Majesty's Schooner, Messissauge, praying for two thousand acres at Toronto. Ordered that this petitioner receive twelve hundred acres at or near the place specified in his petition.

The memorial of John Bouchette praying for five hundred acres adjoining the land his father prays for. Ordered that this petitioner be allowed to receive two hundred acres adjacent to the land granted to his father, J. B. Bouchette.

The Honourable Peter Russell laid two petitions before the Board, the first in behalf of William and Charles Willcocks, merchants, praying for a grant of a front town lot and two hundred acres each in the town and neighbourhood of Toronto.

The second petition presented by the Hon. Peter Russell was in behalf of John Dennison, who prays for two hundred acres of land near Toronto. Ordered that the prayer of the above petitions be granted when proper surveys are made.

His Excellency informed the Council he wished to propose a sub-division and increase of the four existing Land Boards in order to facilitate and expedite the business of the several Land-granting Departments throughout this Province.

The names of the gentlemen His Excellency proposed to constitute Land Boards were read together with the counties each individual Board was to be established in, as follows:

COUNTIES OF GLENGARRY AND STORMONT:—James Gray, Jeremiah French, John McDonell, Richard Wilkinson, Archibald McDonell.

COUNTY OF DUNDAS:—Hon. Hugh Munro, Malcolm McMartin, Richard Duncan, Thomas Smith.

COUNTIES OF GRENVILLE AND LEEDS:—Peter Drummond, Thomas Frazer, Ephraim Jones, Justus Sherwood, William Frazer.

COUNTY OF FRONTENAC:—The Land Board of the late District of Mecklenburg to be limited to the County of Frontenac: Hon. R. Cartwright, Neil McLean, James McDonell, Hector McLean, Rich. Cartwright, William Atkinson, Rev. J. Stuart, Officer Commanding for the time being.

COUNTIES OF LENOX, ADDINGTON, HASTINGS AND PRINCE EDWARD:—Peter Van Alstine, Hazelton Spencer, Alexander Fisher, Archibald McDonell, Joshua Booth.

COUNTY OF LINCOLN:—The Land Board of the late District of Nassau to be limited to the County of Lincoln: Officer Commanding at Niagara, Hon. R. Hamilton, Peter Tenbrook, Nathaniel Pettit, John Warren, John McNabb, Lieut.-Col. Butler, Benj. Pawling, John Burch, Robt. Kerr, Officer of R. Engineers at Niagara.

COUNTIES OF ESSEX AND KENT:—The Land Board of the late District of Hesse to be limited to the Counties of Essex and Kent: The Officer Commanding at Detroit, Hon. Wm. Robertson, Wm. Dummer Powell, St. Martin Adhemar, George Leith, Hon. Alexander Grant, Alexander McKee, John Askin, Montigny de Louvigny, The Officer of R. Engineers at Detroit.

Resolved that the several Boards be constituted as above mentioned, and that the persons above named be appointed members thereof.

Sunday, 21st October, 1792.

At the Council Chamber, Navy Hall.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; Alexander Grant and Peter Russell.

A draft of a circular letter was laid upon the table to be written as soon as possible to the members of the several Land Boards throughout the Province and being read was approved, as follows:

(Circular) Council Chamber, Navy Hall,

Oct. 21st, 1792.

Gentlemen,—In order to the more easy carrying the King's benevolence in the grant of lands into effect, as well as to lessen the weight of business undertaken by the several Land Office Boards of the four Districts, for the public benefit; His Excellency Lieut. Governor Simcoe in Council has been pleased to increase the number of the Land Boards, and has appointed you ....
to constitute a Land Board for the counties of ....
and that any three members thereof be a quorum for the transaction of ......
..............business.

The present existing Rules and Regulations for the conduct of the Land-granting Department, seem competent to the discharge of the trust committed to you; the plan of survey, however, so far as it relates to the situations of the reserves, is altered and you will please to have special regard that the two-sevenths of the land be reserved, as directed by the Act of Parliament, in the manner pointed out by the chequered plan accompanying this, and in those townships where the location is so far advanced as to prevent the two-sevenths being reserved agreeably to the plan, you will be careful not to grant any part or parcel of the remainder of such township; as the Deputy Surveyors will have direction during the course of the winter to fill up the schedules with the names of the persons to whom the lands have been granted by the different authorities, which have been given for that purpose; you are requested to give every assistance in your power that this very necessary object may be effectually accomplished; and to settle by the interference of your respectable arbitration, as far as possible, any dispute that may have arisen between competitors for the same allotment.

I have the Honour to be, Gentlemen, &c.

Resolved that this letter be immediately written by the Clerk of the Council and that it be circulated accordingly.

A letter from the magistrates and principal inhabitants of the Home District petitioning for an Annual Fair to be established in the neighbourhood of the Town of Newark, and to be holden in the aforesaid situation the second week in October, was presented and read; together with a further requisition signed by the foreman of the Grand Jury in the name of the jury and several respectable inhabitants humbly soliciting for a regular weekly market to be established at the Town of Newark, in the County of Lincoln, was also presented and read.

Resolved that a Proclamation be immediately issued for the establishing an Annual Fair at the Town of Newark, to commence on the second Monday of the month of October next, one thousand seven hundred and ninety-three, and on the second Monday of every subsequent month of October, and to continue for and during the space of six days: And that another Proclamation be issued for the purpose of establishing a market at the Town of Newark as aforesaid, and that the Proclamation relative to an Annual Fair be issued in the manner and form following:

PROCLAMATION.

By His Excellency, John Graves Simcoe, Esq., Lieutenant Governor of the Province of Upper Canada, Colonel Commanding His Majesty's Forces in the said Province, &c.,

WHEREAS His Majesty has been graciously pleased by letters patent under the Great Seal of Great Britain to give me full power by and with the advice of the Executive Council to order and appoint such fairs, marts, and markets as shall be thought fit and necessary within the Province of Upper Canada. AND WHEREAS it would greatly tend to promote and encourage the agriculture and trade of this district to establish an Annual Fair within the same, in pursuance therefore of the power thus given to me, I have by and with the advice and consent of the Executive Council of this Province, ordered and appointed, and by this PROCLAMATION do order and appoint, that an Annual Fair for the buying, selling or exchanging all such cattle, grain, provision, goods, wares and merchandize as shall be then and there produced, shall be held yearly and every year at the Town of Newark, in the County of Lincoln, to commence on the second Monday in the month of October next, in the year of our Lord one thousand seven hundred and ninety-three, and on the second Monday of every subsequent month of October to continue for and during the space of six days, and as a further encouragement it is hereby declared that for two days next before the beginning of the said fair, during the continuance thereof, and for two days next after the same, all persons going or returning to or from the said fair, together with their cattle, grain, provision, goods, wares and merchandize shall be conveyed toll free across the river to and from the said Town of Newark. And hereof the inhabitants of this Province, and all others concerned, are to take notice, and govern themselves accordingly.

Given under my Hand and Seal at Arms at the Government House, at the Town of Newark, in the County of Lincoln, this day of in the year of our Lord one thousand seven hundred and ninety-three.
By His Excellency's Command. (to be signed) J.G.S.

24th November, 1792.

At the Council Chamber, Navy Hall.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; and Peter Russell.

His Excellency was pleased to read an extract of a letter from the Right Hon. Henry Dundas, one of His Majesty's Principal Secretaries of State relative to a table of fees.

His Excellency proposed to the Board that the table of fees as adopted in the Province of New Brunswick should be copied and transmitted to the Right Hon. the Secretary of State as suitable to the Province of Upper Canada, but that such fees be not considered as an overt act until they may be approved by His Majesty.

A table of fees was then produced by William Jarvis, Esq., Secretary of the Province, which was read.

The Hon. William Osgoode suggested if it might not be advisable to prevent jealousies among petitioners for land to communicate with the Hon. the Executive Council of Lower Canada, on the subject of a table of fees.

His Excellency then proposed to the Hon. Board to adopt pro tempore the table of fees as settled in New Brunswick, to write to His Excellency the Lieut. Governor of that Province for a duplicate of them, and to make report and communication thereof to the Right Hon. the Secretary of State and to His Excellency the Lieut. Governor of Lower Canada.

The Council determined as it appeared immediately expedient to adopt the table of fees as established in New Brunswick, and that His Majesty's concurrence thereof may be solicited.

Abraham Dayton and Noah Richards personally attended; the former preferred a petition for a township which was read accordingly. Reference was had to Mr. Jones's (Deputy Surveyor) map, and his petition is granted provided the land is purchased from the Indians.

Monday, 31st December, 1792.

At the Council Chamber, Navy Hall.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; and Peter Russell.

Read the petition of William Willcocks and associates praying for the Township of Norwich upon Lake Ontario.

The Honourable the Council were pleased to grant the prayer of the petition in manner following, viz: one thousand acres to William Willcocks, in addition to the two hundred already granted him at Toronto; and two hundred acres in the said township to each individual settler brought by him.

Tuesday, 1st January, 1793.

At the Council Chamber, Navy Hall.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; and Peter Russell.

His Excellency the Lieut. Governor was pleased to submit to the Council the Report of the Committee on the claims of certain Indians to lands assigned them upon the Grand River, dated December 24th, 1791, and having considered the said Report, they were pleased to concur in opinion with the Committee of the 24th of December, 1791, and to direct that a grant be made under the Great Seal of the Province in favour of the principal chiefs on behalf of their nations, or persons in trust for them and their heirs for ever, of a tract of lands, on the Grand River, agreeably to the survey reported by Mr. Jones as promised to the Indians of the Six Nations, and that the Attorney General be instructed to prepare a conveyance accordingly, conformably to the survey.

Tuesday, 8th January, 1793.

At the Council Chamber, Navy Hall.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; and Peter Russell.

Read the petition of Captain Alexander Harrow for land adjoining Captain Bird's farm at the mouth of Detroit River.

Read several petitions for locations in the Indian officers' land, and the Reserve near the mouth of the Streight of Detroit.

Sundry extracts from the Register of the Land Board of the Western District and other papers relative to a tract of land ceded by the Indians to their officers in 1784, were produced by Captain Caldwell who also attended to give other information himself relative to the said tract. All these documents were accordingly read.

The Council were pleased to resolve that a township be laid out of the tract in question at the mouth of the Detroit River, to be called the Township of Malden, to commence on the strait at the south boundary of the Indian Land thence along and following the course of the river and lake till it strikes the west boundary of lot No. 97 in the second conceded township, thence up the said west boundary of the lots 97 in the 1st and 2nd concession as heretofore surveyed, and said to be seventy-six acres from the lake to the rear of the second concession, from thence east until it intersects a line produced south from the rear of the Indian Land; Resolved that Colonel Alexander McKee, Captains Elliot and Caldwell, be the patentees of the above mentioned township, and the persons who have been settled under the authority of the late Governor Hay, and who have actually made improvements.

It appears that the marsh has been granted to the sons of Captain Caldwell by the Honourable Council of Lower Canada.

The Indian officers have it at their option to compleat their quota of land in the said township.

The land lying between Captain Bird's lots and the Indian Land being reserved for Government, Captain Harrow's petition for that tract is rejected.

In all other respects the Township of Malden to be subject to such general regulations as are or may be hereafter framed for the government of townships.

Especial care to be taken that the reserve be made of the two-sevenths.

Thursday, 17th January, 1793.

At the Council Chamber, Navy Hall.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; and Peter Russell.

His Excellency the Lieutenant Governor referred to the Council the petition of Mr. Joshua Pell, an American loyalist.

It appears to His Excellency the Lieutenant Governor and the Council that Mr. Pell is entitled to provisions, clothing, family lands, implements of husbandry, etc., agreeably to his certificate signed by Mr. Motz.

Saturday, 2nd February, 1793.

At the Council Chamber, Navy Hall.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; and Peter Russell.

His Excellency acquainted the Board that he wished to call their attention to the situation of the several persons occupying lands or claiming to be entitled thereto under various authorities since the first settlement of the Province, and to consult on the most effectual means of carrying His Majesty's gracious intentions into execution by making out regular grants of allotments of land to such persons as are respectively entitled thereto.

Resolved that immediate steps be taken to fulfil His Majesty's gracious intentions progressively throughout the Province, and that the same be publicly made known; and for that purpose that notice be given to all persons claiming any allotment of land within the Home District of this Province that they do forthwith bring in to the Attorney General of the Province the certificate, ticket of occupation, warrant, or other document whereon they severally found their claim; or transmit to him an attested copy thereof that he may report thereon to His Excellency in Council in order that regular and effective grants of estates of inheritance in the said allotments may without delay be made out to all persons entitled thereto conformably to His Majesty's Royal Proclamation, to the Rules and Regulations for the conduct of the Land Office Department heretofore severally declared and made public, and in pursuance of an Act of Parliament passed in the thirty-first year of His present Majesty's reign, entitled an Act to repeal certain parts of an Act passed in the fourteenth year of His Majesty's reign, entitled an Act for making more effectual provision for the government of the Province of Quebec in North America, and to make further provision for the government of the said Province.

And further that due notice shall from time to time be given to all persons claiming lands within the remaining districts of this Province as soon as it shall be convenient and practicable to proceed on their claims.

Sunday, 3rd February, 1793.

At the Council Chamber, Navy Hall.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; and Peter Russell.

His Excellency the Lieutenant Governor was pleased to order the accounts of the Province to be laid before the Council for their inspection and audit.

The Council were pleased to examine an account of cash received and paid by the Hon. Peter Russell, Receiver General, between the first of June, one thousand, seven hundred and ninety-two, and the thirty-first of December, one thousand, seven hundred and ninety-two, amounting to the sum of two thousand, nine hundred and ninety-five pounds, five shillings, and two pence (sterling), in general account current with Government.

The Council find the expenditure thereof properly authorized and vouched, therefore certify the same to be regular, orderly, and to the best of their knowledge and belief just and true; the several sums received are regularly carried to the credit of Government, and the balance remaining in the hands of the

Receiver General on the thirty-first of last December, one thousand, seven hundred and ninety-two, amounts to the sum of two thousand, three hundred and twelve pounds, fourteen shillings, and nine pence farthing (sterling), for which he is accountable.

The Council were pleased to examine an account ending the 10th of last October, one thousand, seven hundred and ninety-two of cash received and paid by David William Smith, Esq., acting Surveyor General of the Province, for the incidental expenses of the Surveying Department belonging thereunto, amounting to the sum of six hundred and ninety-six pounds, three shillings and seven pence halfpenny (Quebec currency) and the Council find the expenditure thereof properly authorized and vouched, therefore certify the same to be regular, orderly, and to the best of their knowledge and belief just and true.

The Council were pleased to examine an account of contingencies incurred in the office and under the orders of His Excellency, Lieutenant Governor Simcoe, from the 12th of September, 1791, and from the 1st of January to the 31st of December, 1792 (inclusive), amounting to the sum of five hundred and thirty-one pounds, eleven shillings and eleven pence (sterling).

The Council find the expenditure thereof properly authorized and vouched, therefore certify the same to be regular, orderly, and to the best of their knowledge and belief just and true; the balance remaining in the Lieutenant Governor's office (as per warrant upon the Receiver General of Upper Canada for one thousand pounds sterling) amounts to the sum of four hundred and sixty-eight pounds, eight shillings and one penny sterling.

Monday, 17th March, 1793.

At the Council Chamber, Navy Hall.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; and Peter Russell.

Read a Report from the Land Board of the County of Dundas. Ordered that this Report stand over for further consideration.

Read a petition from Peter Drummond, Esq., praying for a township. Ordered that this petition stand over for further consideration.

Read a petition from John Munro, Esq., praying for a township. Ordered that this petition stand over for further consideration.

Read a petition from Richard Duncan, Esq., praying for a township. Ordered that this petition stand over for further consideration.

Read a petition from Thomas Frazer, Esq., praying for a township. Ordered that this petition stand over for further consideration.

Read a petition from Richard Duncan, Esq., and Thomas Frazer, Esq., praying for a township. Ordered that this petition stand over for further consideration.

Read a petition from William McClennon praying to be continued in the lot he had improved near Queenstown (or the West Landing). Ordered that this petition be referred to Lieut. Pilkinton of the Royal Engineers for his report thereon.

Read a petition from William Frazer, Esq., praying for a township. Ordered that this petition stand over for further consideration.

Wednesday, 21st March, 1793.

At the Council Chamber, Navy Hall.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; and Peter Russell.

Peter Martin, a negro (in the service of Colonel Butler), attended the Board for the purpose of informing them of a violent outrage committed by one —Fromond, an inhabitant of this Province residing near Queenstown (or the West Landing) on the person of Chloe Cooley, a negro girl in his service, by binding her and violently and forcibly transporting her across the river, and delivering her against her will to certain persons unknown; to prove the truth of his allegation he produced William Grisley (or Crisley).

William Grisley, an inhabitant near Messissague Point in this Province, says: that on Wednesday evening last he was at work at Mr. Fromond's near Queenstown, who, in conversation, told him he was going to sell his negro wench to some persons in the States; that in the evening he saw the said negro girl tied with a rope; that afterwards a boat was brought and the said — Fromond with his brother and one Venevery, forced the said negro girl into it; that he was desired to come into the boat, which he did but did not assist or was otherwise concerned in carrying off the said negro girl, but that all the others were, and carried the boat across the river; that the said negro girl was then taken and delivered to a man upon the bank of the river by — Fromond; that she screamed violently and made resistance, but was tied in the same manner as when the said William Grisley first saw her, and in that situation delivered to the man.

William Grisley further says that he saw a negro at a distance, he believes, tied in the same manner and has heard that many other persons mean to do the same by their negroes.

Resolved that it is necessary to take immediate steps to prevent the continuance of such violent breaches of the public peace, and for that purpose that His Majesty's Attorney General be forthwith directed to prosecute the said Fromond.

Thursday, 22nd March, 1793.

At the Council Chamber, Navy Hall.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; and Peter Russell.

His Excellency called the attention of the Board to three petitions he had received for townships.

Read a petition signed by Andrew Pierce, Samuel Jarvis, Strong Sturges, John Beach and Andrew Beires and William Whelpley, and their numerous associates, praying for two townships on the north side of Lake Ontario, and four townships in any other part of the Province; on certain conditions therein specified. Ordered that the prayer of this petition be granted for three townships, as follows: the Township of Bristol upon Lake Ontario, and another township immediately behind it, and a third township (not named) but next adjoining that granted to Dayton, and other numerous associates. Mr. Andrew Pierce attended the Board in behalf of himself and the several associates above named.

Read a petition signed Jasper Murdoch and associates, praying for one township, viz.: the Township of Clarke.

Mr. Jasper Murdoch attended the Board, his petition in behalf of himself and numerous associates being taken into due consideration. Ordered that the prayer of this petition be granted for one township as follows: the Township of Clarke, situated upon the north side of Lake Ontario.

Read a petition signed Silas Hodges, Stephen Williams, Nathan Burr Graham, and John Andrew Graham, and their associates, praying for the Township of Cramahé upon the north side of Lake Ontario.

Mr. John Andrew Graham attended the Board and his petition being duly investigated for himself and associates, it was ordered that the prayer of this petition be granted for the aforesaid Township of Cramahé.

Friday, 23rd March, 1793.

At the Council Chamber, Navy Hall.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; and Peter Russell.

His Excellency informed the Board he wished to call their attention to several petitions he had received for townships.

Read a petition signed Gideon Bostwick, Robert Williams, Seth Hamlin, Abel Kelsee and Thomas Ingersoll, and numerous associates, praying for a township.

Thomas Ingersoll appeared in behalf of himself and the above named associates, in consideration of the well known loyalty and sufferings of the Reverend Gideon Bostwick, one of the petitioners, His Excellency, the Lieutenant Governor, and Council are of opinion that he comes precisely under that description of persons who ought to be encouraged to settle in this Province and not doubting but that he will have due regard to the principles and morals of the proposed inhabitants in his neighbourhood grant the aforesaid petition for one township.

Read a petition signed Edward R. Campbell, John Norton, Samuel Willard and Joseph Willard, and numerous associates, praying for a township.

Edward R. Campbell appeared in behalf of himself, and the above named associates, in consideration of the well known loyalty and sufferings of the Willard Family mentioned in the above petition, His Excellency, the Lieutenant Governor, and Council are of opinion that they come precisely under that description of persons who ought to be encouraged to settle in this Province, and not doubting but that they will have due regard to the principles and morals of the proposed inhabitants in their neighbourhood grant the aforesaid petition for one township.

Read a petition signed Micah Read, Ebenezer Britain, Thomas Appleton, Nathaniel Knapp, Joseph Benson, Joseph Pierce, and Alpheus Read, and numerous associates, praying for one township.

Micah Read appeared in behalf of himself and associates. Resolved that this petition is inadmissible, but in consideration of the services of Micah Read to His Majesty in the war of 1759, His Excellency, the Lieutenant Governor, and Council are pleased to grant him six hundred acres of land for himself, and two hundred acres for each of his sons.

Read a petition signed Thomas Collins Drew, James Fulton, Henry Nace, John Peck, Joshua Quinton, and John Quinton, and numerous associates, praying for one township.

Thomas Collins Drew appeared in behalf of himself and the above-named petitioners. Ordered that as it appears Mr. James Fulton was a Captain in His Majesty's service, and that Mr. Drew has resided in New Brunswick, which he left on account of the inclemency of the climate, a township is granted to them, not doubting but that they will give a preference to persons of a similar description.

John Laroby attended the Board and petitioned for land. Ordered that the above-named petitioner may receive a lot of two hundred acres of land.

Read a petition signed Seth Russell, Solomon Stoddard, Daniel Pomeroy, William Ellis, Elisha Hubbard and John Hubbard, and numerous associates, praying for a township.

Seth Russell appeared in behalf of himself and the aforesaid petitioners. Resolved that this petition is inadmissible, but that Seth Russell, one of the petitioners, may receive a farm lot of two hundred acres for himself.

Monday, 1st April, 1793.

At the Council Chamber, Navy Hall.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; and Peter Russell.

His Excellency ordered a letter he had received from Lieut.-Colonel Butler (Deputy Agent of Indian Affairs) to be laid before the Board and to be read accordingly. This letter states the services to His Majesty during the late war of Captains John, Isaac and Aaron, three Mohawk Chiefs at the Bay of Quinté, and petitioning for the proportion of land that other Captains are entitled to.

Captains John and Isaac attended the Board. Resolved that the abovementioned particulars (viz: Captains John, Isaac, and Aaron), receive the same quantity of land individually that other Captains are entitled to, and that they be referred to the Land Board of the County of Leeds, in order that this resolution may be put in execution as soon as possible.

Read a report on lands reserved for the Mohawk Indians at the Bay of Quinté (signed D. W. Smith, Acting Surveyor General, and dated, Surveyor General's Office, Upper Canada, March 29th, 1792), submitting the following, relative to the reserves in question.

The tract will be bounded in front by the Bay of Quinté, between the mouths of the River Shannon and Bowen's Creek, about twelve miles westerly by a line running north sixteen degrees west from the west side of the mouth of the River Shannon, and easterly by a line running north sixteen west, from the mouth of Bowen's Creek,—and northerly by a line running east sixteen degrees north, and west sixteen degrees south at the distance of about thirteen miles back from the Bay of Quinté, measured on the western boundary aforesaid to the northeast angle of the Township of Thurlow.

Resolved that the above description of the reserves for the Mohawk Indians settled on the Bay of Quinté, be adopted and carried into execution, and for that purpose that a grant be directed to be made under the Great Seal of the Province in favour of the principal chiefs on behalf of their nation (or tribe, as abovenamed) or persons in trust for them for ever.

Sunday, 13th April, 1793.

At the Council Chamber, Navy Hall.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; and Peter Russell.

His Excellency called the attention of the Board to doubts that had been entertained by some of the Land-granting Departments within this Province respecting their discretion to refuse certificates to persons of known disloyalty.

The following resolution was adopted and ordered to be circulated as a Minute of Council by the Clerk of the Council.

WHEREAS doubts have been entertained at some of the Boards of the Land-granting Departments within this Province whether they were at liberty to exercise their discretion in refusing to grant certificates to persons of known disloyalty and disaffection to the British Government who may nevertheless offer to take the oaths, and make the subscriptions required.

Resolved that it is not only required of the members of the Land Boards to make diligent scrutiny into the characters and conduct of all unrecommended persons who shall apply for certificates, but it is their unquestionable duty as good subjects to dismiss the applications of all such as are of known disloyal principles, inasmuch as 'tho His Majesty's bounty is not restricted solely to his own subjects, yet it is not meant to be extended to such as have wilfully resisted his Crown and Government, and who persist in principles and opinions which are hostile to the British Constitution.

Read a Report from the Land Board of the County of Dundas which had been previously read to the Council on the 17th of last March, and ordered to stand over for further consideration.

Resolved that the following letter be written to the above-mentioned Land Board by the Clerk to the Council.

Gentlemen,—I have laid before His Excellency the Lieutenant Governor and the Honourable the Executive Council, the Minutes of the Land Board of the County of Dundas on the 17th of December last.

I am to request you will be so good as to transmit the names of such half-pay officers whose claims were finally approved of by Lord Dorchester and the Council of the late Province of Quebec for their additional lands previous to the separation of the Provinces, that the certificates which you require may be sent accordingly; in regard to the altering of the chequered plan of dividing the townships to be granted, and adopting that of Lower Canada, I am directed to observe that His Excellency, the Lieutenant Governor. and the Executive Council having formed the plan which has been transmitted with due deliberation, are not inclined to alter it.

I am, Gentlemen, etc., etc.,

To the members of the Land Board of the County of Dundas.

Wednesday, 16th April, 1793.

At the Council Chamber, Navy Hall.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; and Peter Russell.

His Excellency ordered several petitions that had been presented to be read to the Board.

Read a petition signed Richard Cartwright, Junior, praying for permission to build a store upon the water lot opposite his town lot at Kingston, and likewise to include in the grant the beach marked A up to the bank B specified and accurately drawn in the plan accompanying the petition by Mr. Aitkin, Deputy Surveyor. Ordered that the prayer of this petition be granted.

Joshua Hatheway of the State of Vermont attended the Board and personally petitioned for one or more townships for himself and very numerous associates consisting of upwards of one hundred families. Resolved that as it appears this petitioner is an agent or patentee for sundry persons belonging to the United States, and does not himself propose being an inhabitant of this Province, his petition cannot be granted.

Read a report from the magistrates and principal inhabitants of the Home District at the last April Quarter Sessions relative to the establishment of ferries upon the Niagara River under certain rules and regulations and restrictions. This report is submitted in consequence of a letter from His Excellency the Lieutenant Governor to the magistrates, etc., requesting their opinion upon this subject. Ordered that this report be referred to the Receiver General.

Read a petition signed Robert Kerr, John Ferguson, William Johnson, James Vanhorne and others, their associates, Loyalists, praying for a township of land to the southward of the river Trent opposite an island in the said river, and in the rear of the Townships of Murray or Cramahé. Robert Kerr, Esq., appeared in behalf of himself and associates. Ordered that the prayer of this petition be granted.

His Excellency directed the Eighth Article of the Rules and Regulations framed by the Governor and Council of the late Province of Quebec bearing date the twenty-fifth of August, 1789, for the conduct of the Land Office Department to be read, whereby the several Boards are restricted from granting such spots as contain conveniences for mills which are to be reserved in the hands of the Crown, and upon a due consideration of the increase of population, and wealth within the Province; it appearing to His Excellency and the Council that the reasons assigned for laying such restraint no longer subsist, it would therefore not be conformable to His Majesty's gracious intentions of promoting the welfare and prosperity of his subjects in this Province should these restrictions continue to be imposed.

Resolved that all proprietors of land having thereon conveniences for the erection of mills are hereby permitted and authorized to make use of such advantages provided they do not thereby prejudice the navigation, or obstruct the passage of fish in those waters where they usually resort.

Provided always that this permission does not extend to any part of the river above or below the Falls of Niagara forming the military communication between Lake Erie and Lake Ontario, which is reserved for the purposes of the Crown.

Read a petition signed Richard Duncan, John Munro, Thomas Frazer, William Frazer, Peter Drummond, Justus Sherwood, Joel Stone, James Watson, Samuel Broom, Colin McGregor, Moses Robinson, Samuel Safford, Jonathan Arnold, Joseph Fay, David Fay, and very numerous associates, praying for certain tracts of the waste lands of the Crown in sundry parts of the Province, amounting to thirty townships.

Captain Thomas Frazer attended the Board in behalf of himself and the above-named petitioners and their several associates. Resolved that the prayer of this petition is inadmissible.

To His Excellency John Graves Simcoe, Lieutenant Governor and Commander in Chief in and over His Majesty's Province of Upper Canada, Chancellor and Vice Admiral of the same:

The memorial of Charles, by Divine permission Bishop of Nova Scotia, and authorized to exercise episcopal jurisdiction in the Province aforesaid,

Respectfully Sheweth: That your memorialist desirous to promote a proper sense of the respect which is due to His Majesty's representative, and to others in authority, hath prepared certain collects or prayers for the Lieutenant Governor and Council of the said Province and for the Legislature during their Session; which collects are taken from the Liturgy of the Church of England and Ireland and adapted to the state of this country. That as religion affords the best security for the rectitude of human actions and conduct in the various walks of life, your memorialist is of opinion that the use of those collects in time of public worship will have a tendency to impress the minds of people with sentiments of reverence both towards magistrates and towards their office, which is the institution of Him who is the fountain of all power and was designed for the happiness and benefit of mankind, and that those sentiments will, when deeply impressed, contribute much to the peace and order of society and to produce a ready obedience to lawful authority for conscience sake.

Your memorialist therefore humbly prays that Your Excellency would be pleased to authorize the use of said collects or prayers, and to direct that they may be read in time of divine service, as specified by the rubric prefixed to each in all churches, chapels and places of public worship, by the clergy of the Church of England within the Province under your jurisdiction.

Your memorialist hath the honour to be with the greatest respect,

Your Excellency's Most Obedient and most Humble Servant,

Charles, Nova Scotia.

Halifax, March 1st, 1793.

Saturday, 18th May, 1793.

At the Council Chamber, Navy Hall.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; and Peter Russell.

John Small, Esq., Clerk of the Council appeared and took the oath required, together with the oaths of office.

The petition of Elihu Warner for one hundred and eighty thousand acres of land sufficient for two hundred acres of land for nine hundred settlers. Resolved that Mr. Elihu Warner may have a grant of lands not exceeding six hundred acres, but that it is not expedient to admit a numerous body of settlers without proof of their attachment to the principles of the British Constitution and to His Majesty's Government, but that all persons of known and approved loyalty may come forward with full confidence that His Majesty's bounty will be extended to them agreeably to His Excellency's Proclamation, and to such others for whose moral character and inoffensive deportment they will vouch and be responsible.

The petition of Jererd Ingersoll, and others, for a township. Resolved that the prayer of this petition is inadmissible, but a proportion of land will be granted to himself and family.

J. G. Simcoe

A PROCLAMATION

By His Excellency John Graves Simcoe, Esquire, Lieutenant Governor of Upper Canada, etc.

Whereas it hath been represented to me by memorial of the Right Reverend Father in God, the Bishop of Nova Scotia, that he hath prepared certain collects or prayers for the Lieutenant Governor and Council, and for the Legislature during their Session, which collects are taken from the Liturgy of the Church of England and Ireland, and adapted to the state of this country, and whereas, by the same memorial it is further represented that the regular use of those prayers in time of public worship will have a tendency to impress the minds of the people with due sentiments of reverence for the civil authority which is ordained for their benefit, and that such sentiments, by exciting a spirit of willing obedience for conscience sake, will contribute much to the peace and good order of the community.

I have therefore thought fit, by and with the advice of His Majesty's Council, to authorize the use of the said collects or prayers, and I do hereby authorize and direct that they be regularly used and read in the time of divine service as specified in the respective rubrics prefixed to the said collects hereunto subjoined in all churches and places of public worship by the clergy of the established church within this Province.

Given under my hand and seal at Navy Hall, the eighteenth day of May, in the year of our Lord one thousand seven hundred and ninety-three and in the thirty-third year of His Majesty's reign. By His Excellency's Command.

John Small.

PRAYERS

A prayer for the Lieutenant Governor to be read immediately before the General Thanksgiving and Evening Prayer:

Almighty God from whom all power is derived, we humbly beseech thee to bless thy servant the Lieutenant Governor of this Province and grant that he may use the sword which our Sovereign Lord the King hath committed into his hand, with justice and mercy according to thy blessed will, for the protection of this people and the true religion established among us; enlighten him with thy grace, preserve him by thy providence, and compass him with thy favour. Bless, we beseech thee, the whole Council, direct their consultations to the advancement of thy glory, the good of thy Church, the honour of His Sacred Majesty and the safety and welfare of this Province, grant this, O Merciful Father, for Jesus Christ his sake, our only Saviour and Redeemer, Amen.

Or this:

Almighty God in whose hand all earthly power doth consist, we humbly beseech thee to bless thy servant the Lieutenant Governor of this Province; and grant that the sword which our dread Sovereign Lord the King hath committed into his hand, he may wield in thy faith and fear, and use according to thy blessed will and word. Let thy grace enlighten him, thy goodness confirm him, and thy providence protect him. Bless, we beseech thee, the whole Council, direct their consultations to the advancement of thy glory, the good of thy Church, the honour of His Sacred Majesty, and the safety and welfare of this Province, grant this, O Merciful Father, for Jesus Christ his sake, our only Saviour and Redeemer, Amen.

A prayer for the Legislature of ye Province to be read during their Session, before the General Thanksgiving in Morning and Evening Prayer:

Most gracious God, we humbly beseech thee as for the kingdoms of Great Britain and Ireland and His Majesty's other dominions in general, so especially for this Province. And herein particularly for His Excellency the Lieutenant Governor, the Council and Assembly, under our most gracious and religious King, in their legislative capacity at this time assembled. That thou wouldst be pleased to direct and prosper all their consultations to the advancement of thy glory, the good of thy Church, the safety, honour and welfare of our Sovereign and this Province; that all things may be so ordered and settled by their endeavours upon the best and surest foundations, that peace and happiness, truth and justice, religion and piety, may be established among us for all generations. These and all other necessaries for them, for us, and thy whole Church, we humbly beg in the name and mediation of Jesus Christ, our most blessed Lord and Saviour, Amen.

Monday, 20th May, 1793.

At the Council Chamber, Navy Hall.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; and Peter Russell.

Mr. Smith laid before His Excellency and Council a letter from Mr. Drew and associates dated the 2nd May, 1793, praying for two townships, one for himself and associates, and the other for Doctor Edward Campbell, and associates. Ordered that a survey be made of them and that one be called Rawden and the other be called Huntingdon.

The petition of Lieut. Archibald McDonell for 1,000 acres four miles up the Black Creek, to erect a grist mill upon, etc. Ordered that the same be granted when the land is surveyed.

The petition of Alexis Maisonville, Esq., of Detroit, praying for a tract of land containing four acres in front by eighty in depth, situate between the farm of your petitioner and Antoine Lewis Labadie. The above lands being referred to His Excellency, the Lieutenant Governor in Council, it appears that Ensign Carden having obtained this land under an Indian grant in direct violation of His Majesty's Proclamation in the year 1763, can have no title whatsoever. They are pleased to direct that the lands aforesaid be granted to Alexis Maisonville, Esq.

Several petitions for islands were presented and found inadmissible, there being a General Order in Council that no island will be granted.

Friday, 24th May, 1793.

At the Council Chamber, Navy Hall.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; and Peter Russell.

Devenport Phelps and James Wheelock: Petition for themselves and associates for a township. Referred to the Deputy Surveyor General and ordered to attend to-morrow.

Isaac Swayze: Petitions for himself and associates for a township. Resolved that the prayer of this petition is inadmissible, but permitted to look out where land is surveyed.

John Coltman: Petitions for 200 acres of land at Toronto, and 200 more at the head of Lake Ontario. Ordered that Mr. Coltman has a town lot at Toronto and that his petition for 200 acres at the head of the lake will be taken into consideration when the same be surveyed.

Ezra Dean: Petitions for 200 acres for 200 petitioners each, amounting to 40,000 acres. Ordered to attend to-morrow.

David Brass, Lieutenant in Colonel Butler's late Corps of Rangers: Petitions for 1,050 acres of land the residue of 2,000 acres, and that the same be granted in the Township of Hope. Resolved that the prayer of this petition is inadmissible, the Township of Hope being already granted.

Hugh McDonell: Petitions for a tract of land ten miles square may be granted to him and his associates. Resolved, is informal for want of addition to petitioner's name and date of time or place.

Amos Ansley: Petitioner having discovered iron ore, sufficient in quantity and quality to encourage him to erect a bloomery, prays that he may be authorized to carry on the business of making iron in the Middle District. Resolved that the prayer of this petition is inadmissible, the mines being reserved for the King.

Saturday, 25th May, 1793.

At the Council Chamber, Navy Hall.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; and Peter Russell.

Devenport Phelps and James Wheelock attended from the order of yesterday with the Surveyor General, and His Excellency the Lieutenant Governor in Council were pleased to order them a township in the County of Lincoln in the rear of townships Nos. 7 and 8—and if any of the lands should be taken up, or not land sufficient to complete a township to be made good with the land most contiguous to the same. (See Land Book I, 224.)

Ezra Dean: Petitioner and associates for 40,000 acres, inadmissible, but ordered by His Excellency and Council that he and his associates shall have twenty thousand acres only, in the Chippawa or Welland, and that the same be kept open for two years.

Thomas Collins: Petitions for a tract of land of 69,120 acres. The prayer is inadmissible, but ordered by His Excellency and Council that he may have a grant of two farm lots for himself and son at Toronto.

John McMillan: Praying for a grant of land of 69,120 acres, inadmissible, but ordered that he shall have twelve hundred acres for himself and five sons.

A certificate from the Land Board of the Home District was presented by D. W. Smith, recommending that he should receive a grant in the Town of Newark of four town lots equal to four acres of land with the examination of the Attorney General thereon as to the regularity of the certificate. The Council were pleased to approve the same and ordered that the Surveyor General may be directed to describe the land and that His Majesty's Attorney General be desired to frame and prepare a grant for the same.

JOHN SMALL, Clerk.

Thursday, 30th May, 1793.

At the Council Chamber, Navy Hall.

Present: The Honourables William Osgoode, Chief Justice; Peter Russell and James Baby.

Benjamin Green: Petitions for a township. Ordered that it stand over for want of specification.

Roger Stevens and associates of Marlborough, County of Grenville, petition for a townhsip and also petition for four hundred acres of land on the Great Falls on the River Rideau, having erected a good saw mill thereon and has at this time the necessary preparations to build a grist mill in consequence of the Land Board of Luneberg promising to recommend him to His Excellency in Council for a grant of the same. Ordered that the four hundred acres be granted, but not the township.

The inhabitants of the Township of Young: Petition for the township to be properly surveyed, to secure Captain Jessup possession of lot No. 8 where he is building a grist and saw mill in said township. Ordered that immediate steps be taken to make an accurate survey of the Township of Young, and that special care be given to secure Captain Jessup possession of the 400 acres of land he now occupies, conformable to the recommendation of the Board.

Thomas Dewey: Petitions for himself and associates of 230 men praying for an allotment of 200 acres for each on the River La Tranche. Ordered that Thomas Dewey shall have twenty thousand acres, and the same be kept open for two years.

Timothy Thompson and Samuel Thompson, brothers to Captain Andrew Thompson who was drowned when on duty last war and, by an agreement made before his death, left his effects and property to the petitioners, that as a reward for his past services, they hope he was entitled to land allowed to officers of his rank and they most humbly pray to locate the same in the township at the head of the Bay of Quinté. Resolved that the prayer of this petition stand over for further consideration.

John Heaven and George Heaven petition for land at Long Point. Resolved that the prayer of the petition is inadmissible and that the petitioners look out for land elsewhere.

Willoughby Willard and a great many others petition praying for a tract of land ten miles square. Ordered to stand over for further specifications.

JOHN SMALL.

Friday, 8th June, 1793.

Council Chamber, Navy Hall.

Present: The Honourables William Osgoode, Chief Justice; Peter Russell, James Baby, and Alexander Grant.

Major Smith petitions for 5,000 acres of land. Ordered to stand over till the Acting Surveyor General can attend.

John Smith petitions for land. It appearing that he has not cultivated more than 15 acres of the 200 already granted, ordered that there will be no further grant.

Thomas Wilson petitions for 100 acres of glebe land in the County of Lincoln. Ordered to be referred to the Receiver General.

Benjamin Green petitions for a township. Ordered to stand over till the next Council.

Peter Van Alstine petitions for 400 acres of land to erect a grist mill. Ordered to stand over till the next Council, and to refer to the returns of the Land Board of Marysburg.

Alexander Campbell petitions for two townships. Ordered to be inadmissible, the Council having come to a resolution for the present not to grant any more townships.

The Elders and Deacons of the Lutheran Church, County of Dundas, petition that having built a church in the center of the Township of Williamsburg granted to them by His Excellency, Lord Dorchester, humbly pray that a charter may be granted to them and their successors under the name of St. George's Church. Ordered to be referred to the Attorney General.

Presbyterian Congregation, County Dundas: Memorial praying that the westernmost side of a lot of land having been granted to them by His Excellency, Lord Dorchester, in the center of the Township of Williamsburg, that a grant of the same may be made to them to build a Church and school thereon. Ordered to be referred to the Attorney General.

John Staring: Petitions for land. Ordered to write to the Land Board of Williamsburg to recommend him provided they have no reason why the same should not be granted.

Alexander Campbell, Esq: Petitions for thirty-five persons for 1000 acres of land each. Ordered that it is not expedient to grant the prayer of the petition, but that 200 acres of land be granted to every head of a family, and in addition to each family, 100 acres of land to every male and 50 acres to every female.

Lieutenant Howard: Memorial praying for two thousand acres of land that John Pringle, Ensign in the late 84th Regiment, made over to him and his assignees forever, before witness. Ordered that it does not appear that Ensign Pringle was ever in possession of the lands mentioned in the memorial. The Executive Council do not conceive that he was at liberty to make any assignment of the lands prayed for by Lieutenant Howard, and that the same cannot be granted.

John Dennison: Memorial for 1000 acres of land in the neighbourhood of Edwardsburg. Ordered to be referred to the Land Board of the District of Edwardsburg.

Jemima Johnson, Sarah Johnson and Mary Johnson: Memorial for certain lands that were located by their father, Brant Johnson, in the year 1785, which lands have since been assigned by their father for their use, pray that the same may be confirmed to them by a grant. Ordered to be referred to the Land Board of the Home District.

John Murehead, a loyalist, with eleven others: Memorial from Kingston, praying that the lands which they have drawn nine miles behind the said town may be properly surveyed, as it is impracticable at present to find out the lots drawn, particularly in the second and third concession. Ordered to be referred to the Land Board there.

JOHN SMALL.

Friday, 15th June, 1793.

At the Council Chamber, Navy Hall.

Present: The Honourables William Osgoode, Chief Justice; Peter Russell, James Baby and Alexander Grant.

Benjamin Green and associates for a township. Ordered that the prayer of the memorial cannot be granted, but that they shall have a grant of twenty thousand acres.

David Secord: Memorial for a grant of land of 500 acres which his father was put in possession of by Lieutenant Colonel Button, and that the same may be secured to him. Ordered that the prayer of the petition be granted and that the Surveyor General be directed to make out a return of survey of the premises.

Benjamin Canby: Petition for 200 acres of land to erect a saw mill up Moor's Creek. Ordered that the same be granted, and that the Surveyor General be directed to make a survey of the same.

James Rogers, son of Colonel Rogers, late of the County Lenox: Memorial praying for a compensation for the great losses of his father, etc. Resolved that the prayer of the memorial is inadmissible.

Esther Ross, Widow of Lieutenant Troup: Memorial praying for 1000 acres of land. Ordered that the same be granted.

William Venevery: Memorial for three lots of land, Nos. 96, 97 and 120, in the Ninth Township. Ordered that the prayer of the memorial be granted.

William Baker: Petition for lands at Toronto.

Thomas Baxter: Petition for lands at Toronto. Ordered that they both stand over till arrangements are completely settled.

James Huestis, Lieutenant: Memorial for land. Ordered to stand over for further specification.

John Depue: Memorial for an equivalent quantity of land to others that served as Lieutenant having received 500 acres only. Ordered that 1200 acres be granted when specified.

Joshua Booth, Esq: Memorial for 200 acres of land in the gore between Kingston and Ernest-Town, as a proper situation to build a mill upon. Ordered that the same be granted.

The Reverend Mr. Steward: Memorial for additional lands, being and lying in Ernest-Town in order to put him upon an equal footing with the subaltern officers of the regiment in which he served. Granted; to be referred to the Land Board of Kingston to be carried into execution.

Friday, 22nd June, 1793.

At the Council Chamber, Navy Hall.

Present: The Honourables William Osgoode, Chief Justice; Peter Russell, James Baby and Alexander Grant.

D. W. Smith: Petition for 3 lots in the first concession and 3 lots in the second concession of the second township south side River La Tranche. If not room in the second township, then in the third township. Granted, and ordered that the Board be directed to order the surveyor to locate the petitioner.

Major Smith: Petition for 5000 acres of land for his services in America. Prays to be located in Township No. 9 near Toronto as per enclosed sketch. Ordered that the prayer of the petition be granted, and that the surveyor be ordered to make a return of survey.

Mrs. Perthuia: Memorial for herself and two daughters. Referred to the Land Board of Detroit, and in consequence of her husband's services the Board be directed to give a ticket of location for herself and one to each of her daughters.

Abel Stevens and associates: Memorial for a township. Resolved that the prayer of memorial is inadmissible, but ordered that he shall have a grant of 200 acres of land for himself and 200 acres for each of his children in the Township of Scarborough.

Peter Russell, Esq.: Petition for lots No. 4 and 5 in the front concession of the township on the north side of Burlington Bay with their broken front containing about 300 acres each. Ordered that the same be granted.

John Birch, Esq.: Petition praying to erect a saw mill higher up the river on his own farm being a more convenient place than his present mill stance. Ordered to stand over for consultation with His Excellency.

Naval Officers: Petition, Fort Erie, 26th October, 1792.

Alexander Grant, Esq.: as Commodore, praying 5,000 acres.

Alexander Harron, Lieutenant and Commander, 3,000 acres.

David Cowan and Henry Ford, Lieutenants, each for 2,000 acres. Ordered to stand over for consultation with His Excellency.

Wm. Marsh, Senior: Memorial praying for a grant of land in the Township of Ameliasburgh, County of Prince Edward, about five miles distance south-eastwardly of south landing of the carrying-place, on a small stream of water which discharges itself at the head of the Bay of Quinté into Lake Ontario with permission to erect a saw mill upon the said stream. Ordered that the same be granted and in conformity to the memorial, that the surveyor be directed to assign Mr. Marsh six hundred and fifty acres of land mentioned in the certificate—and that a letter be written to Mr. Baker to recommend that Matthias Marsh, Samuel Marsh and Acey Weller may continue on their improvements in the Township of Murray.

Joseph Ketchum and associates for a township. The prayer of the petition not granted, but ordered that he shall have one thousand acres for himself and 200 acres for each of his children that he shall bring to settle with him in the Township of Scarborough.

Mr. Manning Read and associates for a township. The prayer of petition not granted, but ordered that he shall have six hundred acres for himself and six hundred acres for his father and two hundred acres of land for each of his brothers.

John Blacker: Petition praying for a grant of reserved land, lot No. 2 on the broken lands in front of the Township of Murray having settled and improved the same. Ordered to stand over for further consideration.

Peter Van Alstyne, Esq.: Petition for lots Nos. 5 and 6 in the Township of Marysburg containing 400 acres and to erect a mill thereon for the benefit of the public, &c., prays that the same may be granted to him. Ordered that the same be granted.

Philip McGregory: Petition praying to erect a saw mill upon his farm up the Fifteen Mile Creek. Ordered that the same be granted.

The inhabitants of L'Assomption: Petition praying for a grant of the back concessions there. Ordered that the same be referred to the Land Board.

Mr. Johnson Chew: Petition for 2000 acres of land on or near the River Rideau. Granted, and ordered to be referred to Surveyor General.

Mr. William Francis, Quarter Master in the King's late American Dragoons, and associates. Ordered that he shall have a grant of ten thousand acres for himself and twelve families and that the same shall be reserved at Long Point.

Israel Williams and associates, for a township. Ordered to stand over for want of specification.

Mr. Henry Hay: Petition for 5,000 acres on the River La Tranche to be granted to his mother and family, widow of the late Governor Hay of Detroit and a reduced Field Officer. The prayer of this petition granted and ordered that the Surveyor General be directed to make a return of survey of the premises agreeable to the form of the petition.

William and David Robinson and George Leith and Co. &c., merchants at Detroit. Petition praying permission to erect a wharf opposite the Town of Detroit at the landing of the East Water Gate. Ordered that the same be referred to His Excellency.

James Allen, of Detroit: Petition praying for a grant of land, lots Nos. 5 and 6 on the east side of the River La Peche. Ordered that the same be granted, provided it is not located, but to be referred to the Land Board.

Captain George Lawe: Memorial to locate 3,000 acres of land in the township prayed for by Major Smith, or else on Chippawa. Ordered that the prayer of this memorial be granted.

JOHN SMALL, Clerk.

Friday, 29th June, 1793.

At the Council Chamber, Navy Hall.

Present: The Honourables William Osgoode, Chief Justice; Peter Russell, James Baby and Alexander Grant.

D. W. Smith, Acting Surveyor General, appeared and took the Oaths of Office.

Major Tenbroke: Memorialist having built the house in which the Rev. Mr. Addison now lives, together with the out-buildings, &c., cost upwards of six hundred pounds, which is now included in the town limit, prays His Excellency will take his case into consideration and grant him a lot of land within the last limits of survey as reserved lands for Government. Resolved that the Executive Council cannot dispose of any of the reserved lands.

Captain Munro: Petition praying to have the three thousand acres that he has received and improved confirmed to him by Letters Patent under the Great Seal of the Province with benefit of any stream of water adjoining or running through the same. Granted and ordered that the Surveyor General be directed to make out a return of survey.

Captain Duncan: Petition praying to have the three thousand acres of land that he has received and improved confirmed to him by Letters Patent, etc., with benefit of any stream of water adjoining or running through the same. Granted and ordered that the Surveyor General be directed to make out a return of survey.

Hugh Munro of Edwardsburg: Petition praying for 1,000 acres of land in addition to two thousand already received. Ordered that the same be granted, upon a specification being presented.

Thos. Allen, Lieut.: Petition for 1,200 acres of land in Major Smith's township, or in the neighbourhood of Toronto. Ordered to stand over for further specification.

Joshua Booth: Petition for four hundred acres of land at Thurlow, Midland

District, in addition to six hundred acres already received. Ordered that the same be granted, if room.

Peter J. Smith, Lieut.: Petition for lands near Toronto. Ordered that none be granted for the present.

Moses Goddard and associates: Petition for a township. Ordered to stand over for consultation with His Excellency.

Elisha Baker and associates: Petition for a township. Ordered to stand over for consultation with His Excellency.

John Blacker[1]: Petition stood over from the last Council, is now laid before the Council by the Surveyor General and recommended by His Excellency, that a special order may be made in Council to confirm John Blacker in the land he has actually improved upon the reserves to the extent of thirty acres and that he may receive a lease for the remainder of the 200 acres upon paying a small acknowledgment. Ordered by the Executive Council that the same be granted.

Lemuel Blanchard and associates: Petition for a township. Ordered to stand over for consultation with His Excellency.

Henry Christler, Senior: Petition for lots Nos. 42 and 43, south side, head of Burlington Bay.

Henry Christler, Junior: Petition for lot No. 41, south side head of Burlington Bay.

Ordered that they are both granted.

Mr. Willowby Willard and associates: Petition for a township. Ordered to stand over for consultation with His Excellency.

James Wilson, John Smith, David Jones, Conrad Filman, William Mcleese, Thomas Wilson, Isaac Horning, John Filman, Ab'r Bowman, Christopher Almont, Peter Bowman, John Westbrook, Joseph Smith, John Smith, Junior; Edward Smith, John Book, Abraham Horning, Matthew Lampman, Conrad Latham, John Aikman, William Smith and Anthony Westbrook: `Memorial that having made the settlements on which they live adjoining the west line of Township No. 8, near the road lately laid out from the head of Lake Ontario to the River La Tranche, that they were encouraged by the Land Board and Acting Surveyor to settle upon those lands four years before they were surveyed, which proves now to be reserved lands, your petitioners pray that the same may be confirmed to them. Ordered that they be confirmed in the possession of their lands and that the Surveyor be directed to make reserves for the Crown in some other part of the township.

Lieutenant Huestis: Petition for lot No. 31, second concession, and lot No. 32, third concession, Township Hope. Granted.

Joseph Keeler and associates: Petition for a township. Ordered to stand over for consultation with His Excellency.

Samuel Thomson: Petition that having served as an Officer in the late corps of Butler's Rangers until the year 1778, petitioner's ill-health induced him to accept of the office of Store-keeper to the Indian Department in which employment he remained from that time to the year 1787, prays that he may be put upon the same footing with other subalterns of the reduced corps. The Land Board in the Midland District, in consideration of and with a knowledge of the merits of petitioner, have granted him 600 acres on which he has made valuable improvements. Ordered to be referred back to know what commission he held.

James Farquharson, Assistant Commissary General: Memorial for a proportionable share of lands, and conceives himself entitled to more than the

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[1] Land Book F. p. 251.

500 acres granted to him by Lord Dorchester. Ordered to stand over to consult with His Excellency.

Henry Willard Hunt and associates: Petition for a township. No more townships to be granted. Referred to the Surveyor General.

Elizabeth White, relict of the late Alexander White, praying to have eight hundred acres confirmed to her, that she may transfer the same. Ordered that the same be referred to the Surveyor General.

Terence Smith: Petition for 2,000 acres of land. Prayer of petition not granted, but ordered that he shall have 1,200.

Aaron Brads: Petitioner being settled upon reserved lands, which lands are to be laid out into parcels or town parks, prays that he may have the one he now lives on together with a grant for an adjoining lot to his grand-son. Ordered that the same be referred to the engineers.

Elisha Dennison and associates: Petition for a township. Not granted, but ordered that he shall have 200 acres of land for himself if he chooses to settle in the Province and encouragement for his associates as they come in.

Solomon Spafford and associates: Petition for a township. Not granted, but ordered that six hundred acres be granted for himself and two hundred for each of his children.

Gabriel Lakin and associates: Petition for a township. Not granted, but ordered if disposed to settle himself, 200 acres, and 200 acres for every loyalist that will appear in person.

Calvin May and associates: Petition for a township. Ordered that the same be not granted.

John Van Zanett and associates: Petition for a township. Ordered that the same be not granted.

Abra Lavory: Petition for land at Toronto. Ordered to be referred with the rest of petitions for Toronto.

JOHN SMALL, Clerk.

10th July, 1793.

At the Council Chamber, Navy Hall.

Present: The Honourables William Osgoode, Chief Justice; Peter Russell, James Baby and Alexander Grant.

Alexander Campbell, Esq.: Memorial that having given up certain lands upon south side of Lake St. Francis, at the request of His Excellency, Lord Dorchester, upon promise of an equal grant being made to him for the same, prays His Excellency and the Council will take his case into consideration and grant an order for his lands wherever they may be found vacant. Ordered that an allotment of twelve hundred acres of land be granted to the petitioner in any unlocated place that he may point out.

Naval Officers, Fort Erie: Petition presented the 22nd June last. Ordered that the prayer of the petition be granted.

Lemuel Blanchard and associates: For a township lying in the rear of the ninth township on the north shore of Lake Ontario. Ordered that the prayer of petition be granted.

Joseph Easton and associates: Memorial for a township. Ordered that the remaining part of a township in the rear of Elizabeth-Town be granted.

Elisha Baker and associates, and Moses Goddard and associates: For a township each. Ordered that a township at the back of Cramahé be granted to them and their associates together; and that Willard Hunt and his family be allowed to locate two thousand acres in the same township.

Henry Willard Hunt and associates: Petition for a township. Ordered that Mr. Hunt shall have a grant of two thousand acres, only, for himself and family in the township granted to Messrs. Elisha Baker and Moses Goddard.

Israel Williams and associates: Petition praying for twenty or thirty thousand acres of land. Ordered that Mr. Williams shall have a grant of thirty thousand acres adjoining the southerly line of the Township of Oxford and westerly of the River Rideau.

Joseph Keeler and associates: Petition for a township. Ordered that half a township in the rear of Haldimand be granted to Mr. Keeler and associates, and that the other half shall be reserved.

Nathan Lewis: Petition for a lot on the north side the River La Tranche. Ordered to be referred to the Land Board, Detroit.

Senseman (Headman): Petition from the Moravians praying for a tract of land on River La Tranche to be located on a width of six and three-quarter miles about their village extending twelve miles back on the south side and northward to the purchase line. Ordered that the same be granted.

Joseph Little and associates: Petition for a grant of land ten miles square. Ordered that the prayer of petition be not granted, but that he shall have a grant of four hundred acres for himself.

Arthur McCormick, assistant store-keeper, Indian Department: Memorial praying to locate his land at Toronto. Ordered that a town lot be granted and the petition be filed with the Toronto petitions.

Neil McLean, Assistant Commissary General: Memorialist, having served His Majesty with some credit four and thirty years as Commissary, conceives himself, as a reduced officer in 1783 from 20s. to 7s. 6d. per day and long residence in this Province, entitled to 3,000 acres of the waste lands of the Crown. Resolved that the Council would feel themselves extremely happy could they comply with the prayer of the petition, but they are pleased to order that he shall have a grant of 1,200 acres, and in consideration of his having been a faithful servant of governments, they are pleased to order that Mrs. Mary McLean shall have a grant of 800 acres.

Lieutenant Allison, 5th Regiment, petitions for 1,000 acres in the Township of Long Point and 1,000 acres on Kettle Creek, both on Lake Erie. Ordered that the 1,000 acres on Kettle Creek be granted, and that the petitioner's name be inserted with those who have made application for lands at Long Point.

Benjamin Van Every: Memorial praying for certain lands to be confirmed to John McDonell in order that they may be assigned to himself. Resolved that it does not come under the recognisance of the Council.

Samuel Allds: Memorial for a township. Ordered that he shall have a grant of four hundred acres only.

Samuel Graggs and associates: Memorial for a township. Not granted, but ordered that he shall have a grant of one thousand acres for himself and family, to be referred to the Surveyor General.

John Cumming, Kingston: Petition for a town lot at Toronto. Ordered that the same be granted.

Francis Willowby Willard: Memorial for a township on the River La Tranche. Ordered that no land will be granted there till it is surveyed, but that Mr. Willard shall have a farm lot and town lot at Toronto, and an additional grant to make up the whole together, one thousand acres.

Michael Showers, Senior: Petition for lots Nos. 11 and 12; and Michael Showers, Junior, for lots Nos. 49 and 50, being in Ancaster at the head of Burlington Bay, should there appear to be no other claimants. Ordered that the same be granted.

George Mosley, Benjamin Mosley and Herman Hostetor: Petitioners having served as carpenters in the Engineers Department last war, request His Excellency and Council will grant them a two hundred acre lot each at Toronto. Ordered that the same be granted and to be filed with the Toronto petitions.

Thomas Watson and Effingham Lawrence: Petition for a township or tract of lands 10 miles square on the north side of the township which is granted to a number of Quakers, and west of the Indian lands, and that the said township may be called Lawrence. Ordered that the prayer of the petition be granted.

Timothy Skinner: Petition for a grant of one hundred acres of land where a small creek runs a little below Point Ebene above Fort Erie with permission to erect a mill upon said stream. Ordered that the prayer of petition be granted.

The inhabitants settled round the point called Sugar Loaf, above Fort Erie, petition, praying a survey of their lands. Ordered that directions be given to Surveyor General to carry it into execution as fast as possible.

The inhabitants of L'Assomption petition praying for a grant of the back concessions there. Ordered that the prayer of the petition be granted, provided it does not interfere with any settlement already made.

John Bradt, Lieutenant in Colonel Butler's Rangers: Petitioner having obtained a grant of eight hundred and seventy-five acres in March, 1792, from the Land Board of Nassau as part of the lands promised him as a reduced officer, certificates of which are herewith produced, but a new survey having been laid out with reserves which will very considerably lessen the quantity located, petitioner therefore most humbly prays that the certificates of the Land Board may be confirmed for 875 acres of land as described therein. Petitioner further prays that he may locate on the nearest unreserved and ungranted lots to these six hundred and twenty-five acres still due to him of the quantity allowed to a reduced officer. Resolved, that it appearing upon the face of documents brought forward in support of this petition that the Land Board have exceeded the limits of their power granted to them by the Rules and Regulations for the Land-granting Department, and no report being made from the Surveyor General's Office at Quebec of the location of your petitioner, and it appearing further from the dates of the certificates that the lands in question were granted at a time when they were the property of the Indians, this Board cannot confirm the certificates, but resolve that the petitioner's right is not thereby precluded from obtaining the quantity of land to which he is entitled as near to the original lots as may be.

JOHN SMALL, C.E.C.

11th July, 1793.

At the Council Chamber, Navy Hall.

Present: The Honourables William Osgoode, Chief Justice; Alexander Grant and James Baby.

Hugh Monholland: Memorial for land for himself and ten children. Ordered that he shall have a grant of eight hundred acres for himself and family.

Hazleton Spencer, Lieutenant: Memorial in behalf of himself and Lieutenant Oliver Church, that having located some time since on the north side of Burlington Bay lot No. 2 which lands were apportioned to them as part of the lands they were entitled to draw, are desirous of being confirmed in the possession of said lands. Ordered as there appears to be no return of location from the

Surveyor General's Office at Quebec, to stand over to know by what authority those lands were located.

Wilson Doan: Memorial for to rent the reserved lots near the falls and leave to erect a saw mill upon a small stream which runs through his sister's lot. Ordered, that being upon the military communication cannot be granted.

Benjamin Canby: Memorial that having purchased a piece of land of Samuel Street, Esq., at the Landing, with about half an acre of ground, on which he had a tanyard and other buildings which cost a large sum, prays that he may have the same again, but submits the matter to the Honourable Board, not doubting but he shall receive the most comfortable satisfaction. Ordered that being upon the military communication the same cannot be granted.

Thomas Davis: Petitioner came to this Province in July, 1790, and was directed to settle upon lots Nos. 5 and 6, in the eighth township for which he prays to have a grant of the same. Ordered that the Land Board be authorized to grant the prayer of the petition.

William Davis: Petitioner came to this Province in August last and applied for land, has taken lots No. 3 and 4, in 8th township, for which he prays to have a grant of the same. Ordered that the Land Board be authorised to grant the prayer of petition.

William Ashley, late soldier in His Majesty's 34th Regiment: Petitioner being discharged at Quebec came into this Province with a recommendation to Mr. Collins, the Surveyor, who ordered him to take any unlocated land, which he did near his wife's father's, and having lived upon it near six years and cleared twenty acres and built a good house upon the same, but petitioner having no certificate prays that he may have a grant of the same. Ordered to be referred to the Surveyor General.

Abel Land: Memorial for lots Nos. 18 and 19 in the fifth concession of the 7th township. Ordered that the Land Board be authorized to grant the prayer of petition.

John Pettit: Memorial for lot No. 19 in the first and second concession.

Bartholomew London: Memorial for lots Nos. 18 and 19 in the third concession.

Richard London: Memorial for lots Nos. 16 and 17 in the third concession.

George Corman: Memorial for lots Nos. 21 and 22 in the third concession.

James Lee: Memorial for lots Nos. 20 and 21 in the fourth concession.

John McDeade: Memorial for lot 27 in the fourth concession.

John McDeade: Memorial for lot 26 in the sixth concession, (in dispute). All in the seventh township.

Ordered that the Land Board be authorized to grant the prayer of petitions all but John McDeade's second lot No. 26, in the sixth concession in dispute.

Samuel Thompson, Lieutenant: Memorial praying for fourteen hundred acres of land with what he has received before, to put him upon an equal footing with other officers of his rank. Ordered that the prayer of the petitioner be granted.

Jemina Johnson, Sarah Johnson and Mary Johnson: Memorial was presented on the 8th June last, and referred to the Land Board of Marysburg. Having read the Minutes of that Board it is ordered that the prayer of the memorial be confirmed and that the Surveyor General be directed to locate them as near as the prayer of petition will admit.

The Honourable Commodore Grant: Petition for 3000 acres at the River La Tranche. Ordered that the same be granted.

Francois Billiet, a sergeant in the Artillery: Memorial for lands. Ordered that he shall have a grant of five hundred acres of land; if the petitioner has ever received any, the quantity only to be granted to make up the 500 acres.

Lieutenant Gainsfort: Petition to locate 2000 acres in Township of Pickering on Lake Ontario. Ordered that the prayer of petition be granted.

A. Maisonville, Esq.: Petition for L'Isle du Large and a lot on Lake St. Clair. Ordered that the same be not granted.

William La Mothe: Petitioner prays to receive one thousand acres more of land which, with two thousand already petitioned for, to make up the complement of 3000 acres allowed by His Majesty as a Captain. He wishes to have them at the first fork of River La Tranche. Ordered that the petitioner shall receive such quantity of lands as he is entitled to by his Commission.

Archibald Grant, Lieutenant, 84th: Petitioner having received eight hundred acres of land in the Midland District, prays that he may receive twelve hundred more in the situation reserved by the surveyor of the said District. Ordered that the prayer be granted.

George Chisholme: Petition for land. Ordered that he shall have a grant of four hundred acres.

James May: Petition praying for a grant of Turkey Island. Ordered not granted.

Jacob Harson: Petitioner having been settled many years upon an island known by the name of Harson's Island, between Lake St. Clair and Lake Huron, containing about seven hundred acres of land, prays for a grant of the same. Ordered not granted.

Lieutenant Francois Dequindre: Petitioner having received 200 acres, prays for the surplus that is due to him. Ordered the prayer of petition be granted.

Lieutenant Antoine Dequindre: Petitioner having received only 200 acres, prays that he may locate 1800 acres more. Ordered the prayer of petition be granted.

Jonathan Schieffelin, Lieutenant: Memorial praying for four hundred acres on the River La Tranche and three hundred on the south-east side of the River Detroit and a lot of about three hundred acres in the front concession on the south-east side of the River Detroit bounded on the south west by Alexis Maisonville and on the north east by Antoine Labady. Ordered that he shall have a grant with what he has received to make altogether twelve hundred acres, and that the Surveyor General be directed to assign him the residue.

James and George Girty, Lieutenants in the Indian Department: Memorial for a grant of land of four hundred acres each on the north side of the River La Tranche, adjoining to their brother Simon Girty's. Ordered that the same be granted.

Simon Girty: Memorialist having served His Majesty from his infancy as interpreter in the Indian Department, that during the war he took an active part in the field, besides his station as interpreter, humbly prays for one thousand acres of land on the north side River La Tranche. Ordered the prayer of petition be granted.

Lieutenant Guillaume Dequindre, praying for the residue of his lands. Ordered that the Surveyor General be directed to assign him the residue that he has not received to make together two thousand acres.

Louvigny Montigny: Petition praying for land. Ordered that he shall have a grant of twelve hundred acres and in case he should have held any commission, that a proportionable quantity shall be granted to him.

Mathew Elliott, Captain Indian Department: Petitioner prays for 3000 acres. Ordered that certain Indian officers have their land in the Township of Malden and the prayer of petition granted.

Captain Charles Reaume: Petition praying for his land. Ordered that he shall have a grant with what he has received to make together three thousand acres.

Ensign Henry Hay: Memorialist having served last war, humbly submits to Your Excellency that he may receive part of his lands in the back concessions opposite the fort of Detroit and the remainder as near the seat of Government as Your Excellency may think proper. Ordered that the prayer of petition be granted.

Lieutenant Colonel Connolly: Memorial dated Quebec, 14th January, 1790, to Lord Dorchester for land at Fish Creek on north side of Lake Erie. Resolved that this ought to have been referred to the Commissioners of American Claims.

Captain Elliot of the Indian Department: Memorialist prays for land on Lake Erie being a promontory running into Lake Erie called Point au Plage, nearly the end of the third township, comprehending the whole of the land lying without a right line down from the head of the Bay on the west side of the promontory, to the lake on the east side of the same in part of what your memorialist presumes he is entitled to. Ordered to be referred to His Excellency.

Edward Hazel, of Fredricksburg: Petition for about 200 acres of land. Ordered that he shall receive two hundred acres in addition to what he has already received.

Lieutenant Fontinay Dequindre: Petition praying for the residue of his lands. Ordered that the petitioner being entitled to 2000 acres shall receive a grant to make up that quantity in addition to what he has already received.

Charles Boulanger: Petitions for the residue of his land. Ordered that the petitioner being entitled to as much land as will make up the quantity of two thousand acres, that the Surveyor General be directed to assign him the residue that he has not received.

R. Surphlit: Petitions for the residue of his land. Ordered that he shall receive such addition that shall amount to two thousand acres.

Phil. Louis Joniaire De Chabert: Petitions for three thousand acres. Ordered that the petitioner shall receive an addition to make up that quantity.

Marie Josephe Gouin: Petitions for 1000 acres of land on the south side of the first fork of River La Tranche. Ordered that an additional eight hundred acres be granted.

Adhemar St. Martin: Ordered to stand over till surveyed and that he shall have a grant of twelve hundred acres.

Isidor Chesne: Petition for ye residue of his land. Ordered that he shall receive an addition to make together 3000 acres.

Charles Gouin: Petition for 1000 acres of land on the south side of the first fork of the River La Tranche. Ordered that he have a grant in addition to what he has already received to make together one thousand acres and to be referred to Surveyor General to assign him the lands.

William Macomb, Esq., Detroit: Petitioner having been in possession of Gross Isle situated in the River of Detroit containing about six thousand one hundred and ten acres, which was given to him by the Indians in August, 1776, and having incurred expenses to the amount of five thousand pounds, erecting a grist mill and improving the same, petitioner prays to be confirmed in his titles to the said premises, and also to a small island adjacent to Grosse Isle, commonly called Stone Island, containing about seventy superficial acres. Ordered to be referred to His Excellency.

Charles Baubin: Petition for lands. Ordered that the petitioner being entitled to three thousand acres, that the same be granted.

JOHN SMALL.

13th July, 1793.

At the Council Chamber, Navy Hall.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; Alexander Grant and James Baby.

His Excellency laid before the Honourable Board a Resolution of the House of Assembly of the following tenor:

House of Assembly, Tuesday, 9th July, 1793. Resolved that His Excellency, the Lieutenant Governor, be requested through the Speaker to grant a loan to this House for the purpose of paying the salaries and contingent expenses thereof, which salaries and contingent expenses shall respectively be certified under the hand and seal of the Speaker to His Majesty's Receiver General or other person appointed by His Excellency to issue such loan; the Speaker keeping minutes of every certificate by him so vouched in order to submit the same to the consideration of the House in the next Session thereof.

Resolved that should the funds provided this Session prove insufficient to reimburse His Excellency in the amount of the said loan, that this House will be responsible to make provision during the next Session thereof for making good this deficiency.

Ordered that the Speaker be desired to lay before this Board an estimate of the salaries and contingent expenses as voted by the House.

The Speaker produced the following estimate of salaries as granted by vote of the House of Assembly to the officers thereof:—

Clerk, 5s. per day for one year	£91	5*s.*
Chaplain, per annum	25	
Sergeant-at-Arms, per annum	45	
Door-keeper, per annum	10	
Stationery and other contingent expenses	20	
	£191	5*s.*

J. McDONNELL, Speaker.

Resolved that the Receiver General be directed to issue a sum not exceeding one hundred and ninety-one pounds, five shillings, conformably to the terms in the Resolution of the House of Assembly contained.

John Munro: Petitions for a township. Ordered that the same be granted.

Peter Drummond: Petitions for a township. Ordered that the same be granted.

Richard Duncan and Thomas Frazer: Petition for a township. Ordered that a township in the rear of Williamsburg be granted.

Thomas Frazer: Petitions for a township. Ordered that a township west of Cumberland be granted.

Richard Duncan and Coll. McGregor: Petition for a township. Ordered that a township in the rear of Osnaburgh be granted.

Richard Duncan: Petitions for a township. Ordered that a township east of Marlborough be granted.

William Frazer: Petitions for a township. Ordered that the Township of Gloucester be granted.

Nathan Raymond: Petitions for 2000 acres for himself and family at Chippawa Creek. Ordered that the same be granted.

Abnar Merryfield and his three brothers for 2000 acres. Ordered that the prayer of petition be not granted but that Abnar Merryfield shall have eight hundred acres for himself and family, and that each of his brothers when present shall have a grant in the like proportion.

Benjamin Robinson, Soldier: Petition for lands. Ordered that he shall have a grant of two hundred acres military land.

William Shatheck and Family: Petition for 4000 acres of land. Ordered that he and his family consisting of six children shall have 1000 acres only.

George Playter, Esq.: Petition praying for the same quantity of land as is allowed to reduced captains. Ordered that the prayer of petition be not granted, but that he shall have twelve hundred acres for himself and one hundred for each of his children—five boys and three girls.

Benjamin Willson, John Person, Lewis Dedrick, Peter Bass, Anthony Rummerfield, John Finch, Roger Coonar, Anthony Westbrook, Zebulon Shippy, Arthur Newman, Neisor Ellis and John Cartwright, associates[1]: Petition to take up their land between Long Point and Turkey Point on the west side of Lake Erie. Ordered that the eight marked by Robert Kerr, Esq., as good loyalists shall have a grant of two hundred acres each. (N.B.—Anthony Westbrook has taken up his land at the same place in August last.)

Joseph Dainty: Petitions for a town lot at Toronto and a farm lot of two hundred acres at or near to the same place. Ordered that the prayer of the petition be granted.

JOHN SMALL, C.E.C.

19th July, 1793.

At the Council Chamber, Navy Hall.

Present: The Honourables William Osgoode, Chief Justice; Peter Russell, Alexander Grant and James Baby.

A table of fees received at the different offices in the Province of Nova Scotia authenticated under the hand of J. N. F. Bulkely, Esq., was laid before the Board, and the same having been considered, it was resolved, &c., that this table be adopted except in as much as respects the fees upon grants of land which are so high that it is apprehended they might operate as a check upon population in this distant Province; it is therefore recommended that a table upon a more moderate scale be adopted; and for that purpose that the Clerk of the Council be directed forthwith to write to the Clerk of the Council of His Majesty's Province of Lower Canada requesting him to transmit to this Board a copy of the several fees allowed and taken upon grants of land in that Province. Resolved that the fees upon Commissions of the Peace be paid out of the assessments of the several districts, and that the fees of all commissions that yield an emolument to the holder be paid by the grantees thereof. Resolved that the fee upon Indian grants, 1st April, be suspended till some table of fees respecting land be adopted.

No. I. The Council examined the General Account Current for the half-year ending the 30th June, 1793, of the Honourable Peter Russell, Receiver

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[1] These names are very indistinct in the original and there is uncertainty as to spelling of some of them.

General, amounting to the sum of one thousand, eight hundred and seventy-seven pounds, four shillings and ten pence—2/10—expended, which the Board find properly authorized and vouched, therefore certify to the best of their knowledge and belief, just and true. The several sums received are regularly carried to the credit of Government and the balance remaining in the hands of the Receiver General on the 30th June, one thousand, seven hundred and ninety-three, amounting to the sum of two thousand nine hundred and fifty pounds, seven shillings, three pence—3/10— for which he is accountable.

No. II. The Council examined the General Account Current of D. W. Smith, Surveyor General; from 10th October, 1792, to the 10th April, 1793, amounting to the sum of one thousand twenty-one pounds Quebec Currency with an account of eight hundred pounds received of the Hon. Peter Russell, Receiver General, leaves a balance due to the Surveyor General of two hundred twenty-one pounds, thirteen shillings, (Dollar at five Shillings). The Council find the expenditure thereof properly authorized and vouched, certify the same to be regular, orderly, and to the best of their knowledge and belief, just and true.

No. III. The Council examined an Account of Contingencies in the office and under the order of His Excellency, Lieutenant Governor Simcoe, from the 1st. January, 1793, to the 30th June, 1793, amounting to one thousand seventy-six pounds, twelve shillings and five pence 1/2. The Council find the expenditure thereof properly authorized and vouched, therefore certify the same to be regular, orderly, and to the best of their knowledge and belief, just and true. The balance remaining in the Lieutenant Governor's Office amounts to the sum of two hundred fifty-four pounds, thirteen shillings and one penny half-penny.

No. IV. The Council examined the Contingent Account of David Burns, Clerk of the Crown and of the Common Pleas, amounting to the sum of thirty-eight pounds, fourteen shillings, which was properly authorized and vouched, therefore the Board certify the same to be regular, orderly, and to the best of their knowledge and belief, just and true.

No. V. The Council examined an account of the Attorney General's amounting to sixty-five pounds, ten shillings, but a charge of three pounds, ten shillings for Sheriff's Precept being deducted, makes the balance of the account sixty-one pounds, eighteen shillings, which the Board certify to be regular, orderly, and to the best of their knowledge and belief, just and true.

No. VI. The Council examined an Abstract of Contingencies incurred in the Council Office from 24th July, 1792, to the 30th June, 1793, amounting to the sum of twenty-two pounds, three shillings and five pence ¾—which was properly authorized and vouched. The Board certify to be regular, orderly, and to the best of their knowledge and belief, just and true.

No. VII. The Council examined an account of William Jarvis, Secretary and Register, from the 9th July to 31st December, 1792, amounting to one hundred thirteen pounds, five shillings and one penny; and

No. VIII. An account from the 1st January to 30th June, 1793, amounting to thirty-nine pounds, ten shillings; and also

No. IX. An account of stationery amounting to sixty-two pounds, seventeen shillings. The Board were pleased to make a deduction of nineteen pounds, seven shillings and four pence, which leaves a balance of said account due to William Jarvis, of forty-three pounds, nine shillings and eight pence.

No. X. The Council examined an account of William Jarvis from 9th July to 31st December, 1792, due to His Excellency, Lieutenant Governor Simcoe, amounting to one hundred seventy-six pounds; and also

No. XI. An account from 1st January to 30th June, 1793, due to His Excellency, Lieutenant Governor Simcoe, amounting to thirty-six pounds, ten shillings. The Council find the expenditure thereof properly authorized and vouched, therefore certify the same to be regular, orderly, and to the best of their belief, just and true.

JOHN SMALL.

23rd July, 1793.

At the Council Chamber, Navy Hall.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; Alexander Grant, James Baby and Peter Russell

A letter from D. W. Smith to His Excellency being read in Council, it was ordered to be entered in the Council Book:—

Surveyor General's Office, Province of Upper Canada.

18th July, 1793.

May it please Your Excellency,

Prior to my being enabled to carry into execution the numerous returns of survey which I have been directed to make in obedience to the orders of the Honourable the Executive Council, it may be necessary that Your Excellency should be informed that the few surveyors at present on the establishment are totally inadequate to execute within any reasonable time the surveys ordered and that the expense in running the outlines of the several townships, and some of the concession lines, will naturally much increase the ordinary expenses of the Department, which I do not find myself justified to do without Your Excellency's express approbation and command.

Altho' the proclamation for the encouragement of settlers sets forth that the respective patentees are to have their grants free of any other expense than the fees of office, yet I presume if they require their lines to be run out before the established surveyors can find time to do it, the Crown ought to be exempt from one-half of such expense as may be incurred for effecting the running and marking the outlines and concession lines of the several townships so ordered; I beg therefore to be informed of Your Excellency's intentions on this subject, that the manner of payment and such other measures, as Your Excellency thinks most proper and efficacious, may be adopted.

But how far this arrangement can take place where small allotments of land are made it is difficult to say. At all events it becomes highly necessary for the prevention of confusion, that the outlines of several townships, particularly in the Eastern District, already under Orders of Council, should be ascertained with as little delay as possible. I propose therefore, as Your Excellency has been pleased to recommend Col. Fortune and Lieut. Staggman, to employ these two gentlemen as extra in that quarter,—one extra in the Midland District—one extra in the Home District,—and one extra in the Western District.

These gentlemen to be paid only when on actual service.

As all numerous applications will probably be satisfied in three years, I should hope with this extra assistance at the end of that period that the Department would revert to its ordinary expenses or less. This present extra assistance being renewed and continued under Your Excellency's pleasure every six months.

All which is nevertheless humbly submitted by

D. W. Smith, Acting Surveyor General.

His Excellency
J. G. Simcoe, Esquire,
Lieutenant Governor, Upper Canada.

Henry Darling, Lieut., 5th Regiment: Petition for 2,000 acres land south side the Ottawa River as low down as possible. Ordered that the same be granted.

James Clark, Barrack Master: Petition praying for land near Toronto or Burlington Bay, or, if that should not be convenient, in any other part unlocated, of as many acres as Your Excellency in your wisdom may think his services entitles him to. Ordered that he shall have a grant of twelve hundred acres.

Peter Russell, Esq.: Petition for one thousand acres of land in a township lying immediately behind Burlington Bay, the front of which is formed by the north side of His Majesty's Highway leading from the Bay to River La Tranche and upon and along a rivulet which runs through the said township commonly called Morden's Creek. Ordered that the same be granted.

Hon. James Baby, in behalf of his mother and her children: That your memorialist's father was appointed a Captain in the Indian Department at Detroit in the beginning of the late Rebellion, and continued as such till the latter end of the year 1777, at which time he was placed by Lieut. Governor Hamilton at the head of the said Department and served as Agent for Indian Affairs till peace took place, presuming that he was entitled to 3,000 acres, and that 1,200 acres of land will not be deemed unreasonable in addition for his respectable widow, which your memorialist prays, may be found vacant. Ordered that the same be granted.

Capt. Thomas Bassett, 5th Regiment: Petition for 3,000 acres of land for past services. The Board do not conceive themselves authorized agreeably to the King's Instruction to grant the prayer of the petition.

Capt. David Shank: Petition for 1,500 acres and for 1,000 acres each, the following: Capt. Samuel Smith, Capt. John McGill, Capt. Æneas Shaw, Capt. Spencer, Capt. Wm. Hamilton, Lieut. Allen McNabb, Lieut. Arthur H. Brooking, Lieut. Wm. Mayne Duncanson, Ensign John McGill, David Burns and James Macauley, Surgeons.

Petitioners pray that Your Excellency will please to grant to Capt. David Shank 1,500 acres, and to the rest of the petitioners one thousand acres each, in a township lying immediately behind Burlington Bay, the front of which is formed by the north side of His Majesty's Highway leading from the said Burlington Bay to the River La Tranche or New Thames. Ordered that the prayer of the petitioners be granted.

Lewis Grant and Angus Macdonell, Deputy Provincial Surveyors: Petitioners pray for two hundred acres of land at or near the Township of Toronto (or York) and eight hundred acres of land each in a township lying immediately behind Burlington Bay, the front formed by His Majesty's Highway north side, leading from the said Burlington Bay, or River La Tranche (or New Thames) as lately traced by Your Excellency's directions, &c. Ordered that eight hundred acres be granted to each of petitioners, but that the two hundred to each at Toronto do stand over for further consideration.

Mathew Howell: Petition praying to be confirmed in the land that he was located upon by the Land Board at Kingston in the year 1789, in the Township of Murray. Ordered that a letter be written to recommend Mathew Howell to Mr. Baker to remain upon his lot, having cleared and cultivated part of it and settled upon the same near four years.

Jeremiah Moore: Petition for a lot of land up Moor's Creek, which he has been in possession of near four years, which has been lately granted to Benjamin Canby. Ordered that a letter be written to Mr. Canby to appear to-morrow.

Nathan Barnum, a reduced Subaltern Officer in Gen. De Lancy's Corps: Petitioner prays for two lots at Toronto, No. 16, in the first concession for himself and No. 17, do. for one of his sons, and the remainder of the land that he may be entitled to, in some part of the Province that remains unlocated. Ordered that he shall have a grant of land that he is entitled to, but that part of his petition for lands at Toronto must stand over with the rest of the petitions.

Ordered that Mr. McNiff do make a return of all the townships in the Western District to the Surveyor General.

John Small.

Wednesday, 24th July, 1793.

At the Council Chamber, Navy Hall.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; Alexander Grant, James Baby and Peter Russell

Petitions were received from Mordecai Sayles for lot No. 30; Samuel Anibel for lot No. 23; Peter Farechild for lot No. 14; Benjamin Farechild for lot No. 23; Daniel Farechild for lot No. 15; Isaac Farechild for lot No. 14; Benjamin Green for lot No. 15, and Thomas Sayles for lot No. 30.

The above petitioners request that they may have a grant of their lots each on Jones' land from Burlington Bay to the Grand River. Ordered that the prayer of the petitioners be granted.

Neil McLean: Memorialist being possessed of lot No. 2 in the Town of Kingston and that the occupancy of the beach in the front of the same by any other person would greatly lessen the value of his property, therefore humbly hopes that Your Excellency will grant to him the said beach for the purposes of building wharfs, storehouses, &c., as may be found necessary. Ordered that if any application be made for the same, to be referred to Mr. McLean's memorial.

Mr. Benjamin Canby appeared from the order of yesterday and was ordered to look out for some other place, and Mr. Moore's petition to stand over till the return of his son from the States, who is to bring with him a proper person to erect a mill for his father up Moor's Creek.

John Small.

Saturday, 31st August, 1793.

At the Council Chamber, York (late Toronto).

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; and Peter Russell.

A petition was read from Monsieur L'Abbé Desjardins and Monsieur Le Chevalier Lecorne in behalf of themselves and very many French emigrants (Royalists) praying for land. Ordered that the prayer of this petition lie on the table to be taken into consideration.

Read a memorial of Alexander McDonell, one of the executors of the will of the late Capt. Allan McDonell, praying for the land his father was entitled to, amounting to 3,000 acres agreeably to His Majesty's Proclamation, and to be situated on the north side of the line leading to the River La Tranche, in the rear of the lands held by the widow Morden. Ordered that the prayer of this petition be granted in the township prayed for but so as not to interfere with the lots upon the road.

Read a memorial of Lieut. Alexander McDonell praying for two thousand acres (adjoining that prayed for by himself as one of the executors of the late Capt. Allan McDonell), he being entitled to the same as a reduced Lieutenant in the late Butler's Rangers. Ordered that the prayer of this petition be granted in the township prayed for but so as not to interfere with the lots upon the road, excepting that the petitioner may receive a lot of two hundred acres upon the road in part of his petition.

E. B. LITTLEHALES.

Sunday, 1st September, 1793.

At the Council Chamber, York (late Toronto).

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; and Peter Russell.

His Excellency called the attention of the Board to the petition of the heirs of the late Col. Rankin. Mr. Rankin (son and heir) and one of the executors of the late Col. Rankin, appeared, and the Deputy Surveyor, Mr. Chewett, produced a plan of the Township of Cambridge in the Eastern District. Ordered that five thousand acres be granted to the heirs of the late Col. Rankin in the above mentioned Township of Cambridge, commencing on the east side of the River Petite Nation, and to be confined to that side of the river, especial care being also taken of the reserves of the Crown.

Read a petition signed James Brewerton, praying for a tract of land. Mr. James Brewerton attended. Ordered that his petition be taken into consideration.

E. B. LITTLEHALES.

Monday 2nd September, 1793.

At the Council Chamber, York (late Toronto).

Present: His Excellency, J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice, and Peter Russell.

The Deputy Surveyor attended and produced maps and surveys of the Town and Township of York, which were ordered to be laid on the table.

Resolved that the two center squares, front lots of the proposed City of York, shall be at present reserved together with eight lots of two hundred acres each, immediately behind the aforesaid town lots.

The following petitions for lands in the Township of York, etc., were read:—

John Scadding: Praying for lot No. 15 consisting of 200 acres, first concession near the proposed Town of York. Ordered that the prayer of this petition be granted.

John Cox: Praying for lot No. 14, first concession, and No. 20 second concession. Ordered that lot No. 14 first concession, amounting to near 311 acres, be granted and that the said John Cox do receive, in one of the back concessions, the remainder of the lands he is entitled to as a loyalist, consisting of two hundred acres.

Frederick Brown: Praying for No. 13 first concession. Ordered that the prayer of this petition be granted.

F. Willoughby Willard: Praying for No. 12, first concession, and broken front. Ordered that the prayer of this petition be granted.

George and Benjamin Mosley: Produced an Order of Council for 200 acres each in the Township of York. Ordered that No. 11, first concession, be granted to them and that they receive the remainder of their land in some other concession agreeably to the Order of Council. No. 10, second concession, granted to them.

John Matthews: Praying for 100 acres. Ordered that No. 10, first concession, be granted between him and Thomas Matthews.

Paul Wilcott, Jonathan Wilcott, John Ashbridge, Jonathan Ashbridge and Parker Mills: Praying for 200 acres each. Ordered that Paul Wilcott do receive lot No. 7, first concession, and John Ashbridge lot No. 8, first concession, and Jonathan Ashbridge half of lot No. 9, first concession, east side.

James McDonald: Praying for land. Ordered that the prayer of this petition be granted for the west side of lot No. 9, first concession, 100 acres.

Messrs. Cozens (Brothers): Praying for several lots in the Township of York, and a town lot. Ordered that they do receive No. 6, first concession, No. 16, second do. Nos. 24 and 25, fourth do. and a back town lot.

Andrew and James Hunter: Praying for certain lots in the Township of York. Ordered that they do receive lot No. 5, first concession.

John Phillips: Praying for his lands as a loyalist amounting to 100 acres. Ordered that he may receive the above quantity of land in a back concession and a town lot, half No. 1, third concession, granted to him.

David Ramsay: Praying for a town lot and two hundred acres. Ordered that he may receive a town lot and 200 acres near the lake or some river in the township. No. 2, first concession, granted to him.

Mr. Christopher Robinson: Praying for a town lot and 200 acres. Ordered that he receive a town lot in the back corner of one of the front squares, and lot No. 13, second concession.

Magnus Swanson: Praying for a town lot and 200 acres. Ordered that he may receive a town lot and 200 acres in a back concession. No. 13, third concession, granted to him.

Mr. George Leith: Praying for a front town lot. Ordered that he may receive the same.

John Coon: Praying for No. 19, second concession. Ordered that the petitioner do receive No. 18 in the second concession to the river.

John Henry Kahmann for two town lots. Ordered that he do receive one.

Capt. J. B. Bouchette (Naval Department): Praying for a front lot for himself, and a back town lot for his son, with the land formerly granted to him at Toronto by the Executive Council of this Province. Ordered that he may receive two town lots (one in front) and 100 acres in No. 24, first concession, exclusive of the land heretofore granted him by the Council, and No. 29, second concession, 200 acres, in part of the land granted to him.

John and Thomas Hewitt: Praying for 200 acres. Ordered that they may receive lot No. 15, second concession, being the full amount of the quantity of land they are entitled to as loyalists.

John Stoner: Praying for land. Ordered that No. 19, fourth concession, be granted to him.

Samuel Heron: Praying for a town lot and two hundred acres. Ordered that he may receive a back town lot.

William Smith: Praying for a town lot and 200 acres. Ordered that he may receive a back town lot, and No. 11 in the third concession.

Joseph Dainty: Praying for lot No. 33, first concession. Ordered that a certain part of No. 33 be granted to him.

St. J. B. Rousseau: Praying for lot No. 34 in the first concession. Ordered that a certain part of No. 34 be granted to him.

Patrick Burn: Praying for a town lot. Ordered that he receive a back town lot.

Joseph King: Praying for permission to build a ferry boat, and for a lot of land near the water. Ordered that there exists no objection to his building a large boat of any description for any legal purposes, and that he may receive a back town lot.

Peter Benville: Praying for a town lot and two hundred acres; and Edward Gahan for 200 acres. Granted for 100 acres to be in No. 4, first concession, and No. 4, second concession.

Alexander Campbell (Sailor): Praying for 200 acres. Granted, no place specified.

William Demont: Praying for a town lot and 200 acres in part of His Majesty's bounty as a loyalist. Granted No. 2, third concession.

Bemsley Peters: Praying for a back town lot and 200 acres in part of His Majesty's bounty as a loyalist. Granted No. 3, third concession.

Charles Haslop (Naval Department): Praying for land. Ordered that 600 acres be granted to him in the Midland District as near Kingston as possible.

Abraham Larroway. Praying for 200 acres. No. 19, second concession, granted to him.

Mr. Joseph Forsyth: Praying for a front town lot. Granted.

Mr. Jonathan Sills: Praying for a front town lot. Granted.

Mr. William Willcocks: Praying for a front town lot. Granted, and No. 15, first concession, 100 acres, and half No. 24, second concession, with his son.

Mr. Charles Willcocks: Praying for a front town lot. Granted, and No. 13, first concession, 100 acres, and half No. 24, second concession, with his father; (they having an Order of Council for the same).

Ordered that Mr. Aitkin, Deputy Surveyor, be directed to point out the lots granted to the several petitioners herein mentioned, and to acquaint them that it is expected the same be immediately located.

E. B. LITTLEHALES.

N.B. Joseph Burk to receive 100 acres in No. 4, first concession, or No. 4, second concession, with Peter Benville, Edward Gahan and Alexander Campbell, herein mentioned.

Tuesday, 3rd September, 1793.

At the Council Chamber, York (late Toronto).

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; and Peter Russell.

Mr. Brewerton attended and produced another petition on behalf of himself and his brother, George Brewerton, and the heirs of the late Col. George Brewerton, praying for nine thousand acres in the Township of Cambridge, and situated on the River Petite Nation. Ordered that the prayer of this petition be granted, and that part of the land prayed for shall be situated on one side of the River Petite Nation, in the Township of Cambridge, provided nevertheless, that the above mentioned George and James Brewerton begin to locate and improve and cultivate the same tract of nine thousand acres as aforesaid this year or early in the ensuing summer.

The petition of Asa Belnap and associates for a large tract of land. Mr. Belnap attended. Resolved that the prayer of this petition is inadmissible, but that Mr. Asa Belnap may receive 1,200 acres for himself and that he is also to receive an extract from the Minutes of Council containing the Resolutions of the Board on Saturday, 18th May, 1793.

The petition of Ezra Adams, &c., for a township. Inadmissible.

The memorial of Messrs. Styles and associates for a township. Inadmissible.

The petition of Samuel William Johnson for a township for himself and associates. Inadmissible.

The memorial of Jidson Styles and Nathan Styles for a manufactory of iron to be established by them in Upper Canada. Inadmissible.

Ordered that the above petitioners, Ezra Adams, S. W. Johnson and Messrs. Styles, do receive the same extract from the Minutes of Council as Mr. Asa Belnap herein mentioned.

E. B. LITTLEHALES.

Wednesday, 4th September, 1793

At the Council Chamber, York (late Toronto).

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; and Peter Russell.

The following petitions for land in the Town and Township of York were read and granted:—

The Honourable William Osgoode, Chief Justice, a front town lot and No. 5, first concession (100 acres), and No. 26 in the third concession (200 acres).

Peter Russell, Esquire, Receiver General, a front town lot and No. 14 first concession (100 acres) and No. 23 in the second and third concessions (400 acres).

John White, Esquire, Attorney General, a front town lot and No. 4 first concession (100 acres).

John Small, Esquire, Clerk of the Council, a front town lot and No. 3 first concession (100 acres).

William Jarvis, Esquire, Secretary and Register, a front town lot and No. 2 first concession (100 acres).

Edward Baker Littlehales, Esquire, a front town lot and No. 1 first concession (100 acres).

David William Smith, Esquire, Acting Surveyor General, a front town lot and No. 6 first concession (100 acres).

John McGill, Esquire, His Majesty's Commissary, &c., a front town lot and No. 7 first concession (100 acres).

Mr. Justice Powell, a front town lot and No. 11 first concession (100 acres).

The other Judge (not yet appointed), a front town lot and No. 12 first concession (100 acres).

Solicitor General (not yet appointed), a front town lot and No. 26 first concession (100 acres).

Incumbent, a front town lot and No. 9 first concession (100 acres).

Major Smith—a front town lot and No. 27 first concession (100 acres).

Captain Shank—a town lot and No. 21 first concession (100 acres), No. 26 second concession and No. 27 third concession (400 acres).

Captain Samuel Smith (Queen's Rangers)—a town lot and No. 22 first concession (100 acres); No. 27 second concession and No. 28 third concession (400 acres).

Capt. AEneas Shaw—a town lot and No. 20 first concession (100 acres); No. 28 second concession, and No. 29 third concession (400 acres).

Captain Spencer (Queen's Rangers)—a town lot and No. 23 first concession (100 acres); No. 30 second concession (200 acres).

David Burns, Esquire, Clerk of the Crown—a town lot and No. 25 first concession (100 acres).

James McCaulay, Esquire, His Majesty's Surgeon of Upper Canada—a town lot and No. 10 first concession (100 acres).

Mr. Robert Richardson—a town lot and No. 31 second concession (200 acres).

Ensign and Adjutant McGill—a town lot and No. 25 second concession (200 acres).

Donald McDonell—a front town lot.

Sarah Cranford—a town lot.

George Playter, Esquire—a town lot and No. 8 first concession (100 acres); No. 20 second concession (200 acres); and No. 3 second concession (200 acres).

James Playter—No. 11 second concession (200 acres).

Eli Playter—No. 12 second concession (200 acres).

John Playter—No. 17 second concession (200 acres).

Watson Playter—No. 21 third concession (200 acres).

N.B. The above grants severally mentioned to the Playter family are in part of 2000 acres granted to George Playter by an Order of the Executive Council.

Bolton and McLeod—No. 22 second concession.

Bolton (a brother of the above Bolton)—No. 21 second concession, 200 acres.

Lieut. Archibald McDonell—No. 14 second concession.

Thomas Ridout—a town lot and No. 31, third concession, in part of the land he is entitled to by Order of Council.

John Denison—No. 22, third concession, 200 acres, agreeably to an Order of the Executive Council of this Province.

Lewis Grant—No. 24, third concession, 200 acres.

Augustus Jones—No. 30, third concession, 200 acres.

E. B. LITTLEHALES.

Thursday, 5th September, 1793.

At the Council Chamber, York.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; and Peter Russell.

The following petitions were read:—

Jeremiah Beaty: Praying for 2000 acres. Inadmissible, but the petitioner may receive four hundred acres.

John Collins, Esquire (Deputy Surveyor General of Lower Canada): Praying for patents for two small tracts of land in Upper Canada granted to him by General Haldimand. Mr. Rankin attended and produced a Power of Attorney from Mr. Collins, descriptive of the land prayed for in his petition, as follows—"six hundred and forty acres lying and being on Ganagoyon Bay in the Midland District." Mr. Rankin further states that from the report he is given to understand that Mr. Joshua Booth has had the aforesaid described land re-granted to him. He likewise produced sundry papers confirming the grant of General Haldimand to Mr. Collins. Resolved that Mr. John Collins is strictly entitled to obtain the quantity of land prayed for and heretofore granted to him and that the Clerk of the Council be directed accordingly to write to Mr. Joshua Booth thereupon.

Alexander Aitkin (Deputy Provincial Surveyor): Praying for 1200 acres in the Midland District, 600 on the lake side, Township of Ameliasburgh, first concession, and the other six hundred on the south or west side of a small lake between the Townships of Kingston and Pittsburgh; and a water town lot in the Town of Kingston. Ordered that the prayer of this petition be granted for eleven hundred acres as specified and a town water lot at Kingston.

Mr. Christopher Robinson: Praying for 600 acres of land in the Township of Ameliasburgh near the Carrying Place. Granted.

The following petitions were read and several petitioners personally appeared praying for town lots in the proposed City of York, or land in the township thereof:—

John McKay, for a front town lot in York. Granted.

Mr. James Clark (Barrack Master at Niagara), for a town lot and 200 acres in the Township of York. Ordered that the prayer of this petition be granted for a town lot, and No. 15 third concession—200 acres, in part of the land allowed to him by the Executive Council of this Province.

Capt. J. B. Bouchette, for an additional quantity of land in the Township of York agreeably to his Order of Council. Ordered that the prayer of this petition be granted for No. 3 first concession (200 acres) and No. 32 third concession (200 acres).

Capt. Samuel Smith, for 2000 acres on the Etobicoke River as a reduced officer, according to His Majesty's Proclamation. Ordered that the prayer of this petition be granted to the extent of lands the petitioner is entitled to, viz: 1600 acres, as it appears upon the records in the Council Office that Capt. Samuel Smith above-mentioned has already received an Order of Council for 1400 acres in this Province; (3000 acres being the quantum he is originally entitled to receive.)

Mr. George Newman, for lot 25, third concession, Granted.

Mr. John Lynd, for a front town lot in the proposed Town of York. Granted.

Capt. George Glasgow, for a town lot and 200 acres in the Township of York for himself on behalf of his mother (the widow of a Captain in the Army). Ordered that the prayer of this petition be granted for a town lot and lot No. 39, second concession (200 acres).

Lieut. James Givens, for land in the Township of York. Ordered that the prayer of this petition be granted to the extent of 200 acres, viz: lot No. 32, second concession.

Lieut. Alexander McDonell, for a town lot and No. 12, third concession. Granted.

Angus McDonell, Esquire, for a back town lot and No. 7, second concession (200 acres). Granted.

Mr. James McDonell, praying for No. 6, second concession (200 acres) Granted.

17th May, 1794.

Council Chamber, Newark.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; and Peter Russell.

Mr. Wm. Berczy, and associates: Memorial proposing to bring forward two thousand families and praying for a grant of one million acres. Ordered that a tract of land to the extent of sixty-four thousand acres be granted and that when they shall be properly settled the petitioner may be at liberty to make further application.

Moses Mordant: Petition for lots Nos. 20 and 21, third concession in the Township of Flamborough. Ordered that the same be granted.

Abel Stevens: Petition sent from the Land Board of the Eastern District. Ordered to inform the Land Board that proper measures will be taken respecting his petition and that all persons petitioning for more than 200 acres, unless they have served in a military capacity, must present a special application to His Excellency the Lieutenant Governor and Council.

Mr. Ebenezer Allen, and associates: Memorial for a township on the first plain below the forks of the River Thames joining the lands already petitioned for by him. Ordered that Mr. Allen have a grant of 2000 acres, having served as an officer in the Indian Department, and that John McDonell have a grant of 400 acres, and for every settler that Mr. Allen shall bring in, 200 acres each.

Jacob Watson: Petition to stand over.

Ordered that there be a Council held every Tuesday and Saturday.

J. SMALL.

20th May, 1794.

Council Chamber, Newark.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; and Peter Russell.

Ordered, that a letter be written to the Land Board of the Home District, to request that an immediate return be made to the Council Office of all grants made by them since their establishment and also to be informed of the reasons why no return has been yet sent.

Read the Proceedings of the Land Board for the Counties of Essex and Kent from the 25th May to the 25th December, 1792.

Robert Kerr: Petition praying an order of survey for the township granted to him and associates. Ordered, that the prayer of the petition be complied with, and to be referred to the Acting Surveyor General for survey.

John, Isaac and Aaron, three Mohawk Chiefs, pray that their lands be located to them in the Midland District. Ordered that the Acting Surveyor General be directed to locate them in the Midland District.

Thomas Colpitts, and associates: Petition for a township on the River Thames, another on the River Ouse, and another at the Bay of Quinté. Resolved that no more townships be granted.

Bemslee Peters: Petition for land back of Collins' Bay to compleat 700 acres he supposes himself entitled to. Ordered that the prayer of the petition be not granted as he has located the lands without an order, and the Rev. Mr. Stewart having a previous claim; but the petitioner may apply to the Acting Surveyor General for the same quantity, who will locate him elsewhere.

Benjamin Easton: Petitioner states that he has obtained a grant of land back of Elizabeth-Town and prays an order may issue for the survey of said land. Ordered that the Surveyor General be directed to have drawn the outlines of said tract.

Col. Alexander McKee's memorial. Ordered that it stand over till Saturday next.

His Excellency the Lieutenant Governor desires to call the attention of the Executive Council to that branch of their duty which respects the granting of the Crown Lands, and directs that an extraordinary Board be summoned for that especial purpose on Saturday next at 10 o'clock.

J. SMALL.

Saturday, 24th May, 1794.

Council Chamber, Newark.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; and Peter Russell.

Read a representation from the Acting Surveyor General stating that many irregularities have been practised with regard to the occupation of lands and setting forth the inconvenience and confusion likely to ensue therefrom, which being taken into consideration it was resolved:

That whereas many persons have settled upon lands in different parts of this Province without having obtained any authority, licence or title so to do, such intrusion is injurious to the right of the Crown and abusive of the King's bounty so liberally held out to all sober and industrious settlers on making a proper application to His Excellency in Council, or to the several Land Boards; and therefore it is necessary that immediate measures be taken to remove such trespassers and to prevent the extending of such lawless practices, for which purpose it is hereby ordered that Deputy Surveyors and others employed under the Surveyor General who shall find in the course of their progress that any person or persons have taken possession of any pieces of ground or lot in any unsurveyed or unlocated part, whereby there may be good reason to believe that such occupation has been usurped; that they do immediately report the same, together with the name of the party, to the Surveyor General who, in case he shall find that such person has not been located by a competent authority, shall issue a notice to the party or parties requiring them to move from the premises without delay; and if such warning be not obeyed, he shall report the same to His Excellency in Council in order that the Attorney General may be directed to proceed against such intruders with the utmost rigour of the law; and further that all persons, who shall wilfully hold out after receiving such warning from the Surveyor General, shall be disqualified from becoming partakers of the King's bounty in any part of this Province.

And whereas at the first settlement of the Home District some few persons were authorized by the Commanding Officer for the time being, to take up and occupy certain parcels of land in consequence of which they have been considered as having an equitable claim to the property of such lands, with a view to prevent confusion, uncertainty and contention that will hereafter take place unless the boundaries of each person's property be distinctly ascertained and described, as well as to confirm the right and title of those who have been deserving objects of His Majesty's bounty. It is hereby ordered that all persons claiming such right from an authorized occupation of the land do forthwith hereby give in a memorial thereof, containing a statement of the quality of land which they respectively claim, to the Surveyor General, who shall report thereon to His Excellency in Council, that proper grants may be made out to those who shall be entitled to the same.

And whereas many persons having obtained a certificate have taken possession of lands without having received any assignment from the Surveyor General or Deputy Surveyors by means whereof much confusion has arisen; it is further ordered that no person shall in any case take possession of any lot or parcel of ground until he shall have received a regular assignment thereof from the Surveyor General or Deputy Surveyor under the penalty of being compelled to relinquish all improvements to the person who shall obtain a regular assignment of such lot, and therefore be lawfully entitled to take possession of the same inasmuch as all lots must necessarily be considered as vacant until they are duly assigned and registered in the Surveyor General's office.

And further that all persons at present holding orders or certificates for land which has not been assigned do make application for that purpose as soon as possible.

And whereas, it is desirable to make early provision for all persons authorized by His Majesty's Proclamation or Instructions to receive their respective allotment of land, such persons are hereby required to make immediate applications for the same.

Read the Report of the Land Board for the Counties of Grenville and Leeds from the 17th September, 1793, to the 1st April, 1794, where the following petitions are recommended to His Excellency the Lieutenant Governor in Council, viz:

John Hillicar, for an additional 140 acres of land to what he has already received. Granted.

Nathan Brown and Oliver Sweet, pray for two hundred acres of land each in addition to what they have already received. Granted.

John May, having received 200 acres, prays for an additional grant of 300 acres. Granted.

Polly Stevens, prays for eight hundred acres of land, that is, 200 for herself and three children, No. 30 first concession in the Township of Marlborough, and six hundred acres on the three first lots adjoining above, in Marlborough, this being the land on which the petitioner's husband made his first improvements. Ordered to be referred to the Surveyor General to enquire whether the land petitioned for be vacant, and if his return be in the affirmative that the land be granted.

Captain Richard Wilkins, prays for one thousand acres of land in the Township of Edwardsburg. Ordered that the land be granted.

John McLeod, for an additional 200 acres to 200 he has received. Ordered that the additional quantity of land be granted.

Archibald Montgomery, recommended by the aforesaid Land Board for a grant of 700 acres of land. Ordered that seven hundred acres be granted.

Justus Sherwood, prays for eight hundred acres of land, the same to be on each side of the first creek next to the rear of the Township of Young, which empties into the Great Gananoqui Lake, at the entrance of the said creek into the lake. Ordered to be referred to the Surveyor General to report whether the land mentioned in the petition be not already granted.

Lydia Michel, prays for 200 acres of land. Ordered that 200 acres be granted the petitioner.

John McLean, prays for six hundred acres of land in the Counties of Grenville or Leeds. Ordered, that he be referred to Deputy Surveyor to locate him conformably to petitioner.[1]

Thomas Lake, represents that he has improved on lot No. 9, 4th concession and that the lines lately run through the most part of his lot into a swamp, therefore prays for an additional grant of 200 acres. Ordered that the same be granted.

Daniel McAlm, prays for 100 acres in addition to 200 he has received. Ordered that the same be granted.

Peter Shabach, prays for an additional one hundred acres to two hundred acres he has received. Ordered that the land be granted.

Ordered that when certificates for family lands shall be presented to the Acting Surveyor General, he shall be authorized in assigning those lands at his discretion.

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[1] Rescinded by the O.C. of 4th February, 1807. See page 225 of Land Book G.

Permission is given to the Acting Surveyor General to supply canvas, in order to secure the maps of his office which he represents to be in want thereof, and to charge the same in his accounts.

Ordered that the additional surveyors may be employed during the pleasure of His Excellency the Lieutenant Governor in Council, and that Mr. McNiff may be continued during pleasure in the surveying of the Western District.

The townships in the County of Lincoln are to be completed in their surveys.

The Acting Surveyor General having reported a return of survey of the improvements of Messrs. Ball and Secord and Colonel Butler, &c., ordered that they attend on Saturday next.

Read the Acting Surveyor General's letter 26th April, 1794, covering Mr. Thomas Frazer's letter dated Edwardsburgh, 8th April, 1794.

Read the Acting Surveyor General's letter 6th December, 1793, stating that in pursuance of orders, he had assigned to:—

Samuel Williams	300 acres,
John Davis	200 acres,
Robert Davis	200 acres.

Ordered that the foregoing allotments mentioned therein be granted.

Read the Acting Surveyor General's report 29th September, 1793, on the petitions of: Richard Beasley, Ben. Fairchild, Jun., Margaret Springer, Josiah Lockwood, Selah Styles, and

His report 26th December, 1793, on the petition of Ben. Fairchild.

Whenever the petitioners apply they are to be referred for answers to the Acting Surveyor General's reports.

Read Mr. Smith's memorial for Mr. McKee for lands in the Indian Reserve near River Canard, which remains for consideration.

Read the Acting Surveyor General's report on the petition of Ezekiel Younglove, also the petition. The petitioner is referred to the report and ordered to attend on Saturday next. Mr. Thomas Welch desired also to attend on Saturday.

Read Mr. Thomas Duggan's petition recommended by the Land Board of the Western District for the lands he memorialed for. Ordered that the recommendation of the Board be adopted and that the land petitioned for be granted. The Acting Surveyor General, however, will examine and report thereon.

Read Mr. McKee's letter 23rd January, 1794, with Mr. Secretary Littlehale's indorsement. Ordered that a lot of 200 acres be granted when the town plot of Chatham is fixed on.

Read the petition of Alex. Chisholm and Mr. Aitkins' letter thereon. Ordered that the Acting Surveyor General report thereon.

Ordered that the Acting Surveyor General be made acquainted with such parts of this day's proceedings as relate to his office.

Read the petition of Stephen Burtch. The Acting Surveyor General ordered to report thereon.

Read the petition of Margaret Springer. Ordered that four hundred acres be granted to herself and 200 for each of her family, Rachel, Henrietta, Mary Martha, and Benjamin Springer.

Tuesday, 27th May, 1794.

At the Council Chamber, Newark.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; and Peter Russell.

Read a memorial from the Clerk of the Council, setting forth that by the establishment of the Land-granting Department in the several districts of this Province, the fees and emoluments of his office are considerably diminished.

Whereupon His Excellency and the Council resolve: That it is His Majesty's express will and pleasure that reasonable support be given to the patent officers in the enjoyment of their legal and established fees, rights, privileges and emoluments, according to the true intent and meaning of their respective patents.

It is hereby ordered that the Clerk of the Council by himself and deputies do execute the office of Clerk to the several Land Boards and do make such arrangements for that purpose as may tend to secure the regular discharge of the duties of such appointment.

Read the petition of William Reynolds, and associates, praying for forty-five thousand acres on the River La Tranche or Chippawa. Ordered that William Reynolds have a grant of 200 acres for himself and 200 acres to each of his family that he shall bring with him, and that there shall be a reserve of (five) ten[1] thousand acres for his associates in order that each family as they come in shall have a grant of 200 acres.

Margery Pettay, widow of Barnet Foster deceased, formerly a Sergeant 1st Battalion Maryland Loyalists. Read her petition praying for land for her late husband's services last war. Ordered that four hundred acres be granted to her and two hundred for each of her children, William Pettay, Francis Pettay, Andrew Pettay, and Daniel Pettay, when they shall arrive at the age of twenty-one years.

James Strother: Read his petition for lots Nos. 27 and 28 containing 400 acres in the first concession in the Township of Hawkesbury situate on the Ottawa River, and to erect a saw mill thereon. Ordered that the same be granted.

James Wilson: Read his petition for an additional 250 acres not already located. Rejected, no reason being assigned for such additional grant.

A. Jones, Deputy Surveyor: Read his petition for lot No. 10 on the north side Burlington Bay in the first concession, which lot was formerly assigned him by the Land Board. And also for an additional quantity to make up with what he has already received 1200 acres. Ordered that the additional quantity to make up the 1200 acres prayed for be granted, but that lot No. 10 cannot at present be granted. (The reason for not granting this land at present was a promise the Government made to Monsieur de Jardins and others to reserve it for a French settlement.)

Ebenezer and Philip Jones: Read petition praying for a grant of lot No. 9 to Ebenezer Jones, front concession head of Burlington Bay; and they further pray for additional land to make up 1200 each and that they may be allowed to locate in the 7th township (or Saltfleet); Ebenezer has already received 150 and Philip Jones 200 acres. Ordered that lot No. 9 cannot be granted at present, but the additional quantity prayed for to make up 1200 acres to each be granted. (The same reason subsisted also for this.)

Jacob Beam: Read his petition setting forth his great service and losses, prays for a further allotment of land. Ordered that he shall have a grant of six hundred acres.

Doctor Harffey: Petitioner sets forth that having served as Surgeon's Mate in the General Hospital during the late American War, prays for lots Nos. 8 and 9 on the west side of River la Pêche. Ordered that the same be granted, but to be transmitted to the Land Board of Detroit lest the lots should be previously given away.

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[1] The word "ten" inserted by me—that of "five" being a mistake. Sgd. J. G. Simcoe.

Thomas Markland: Memorial praying for six hundred acres of land near the Kingston mills adjoining Capt. H. Harkimer to the northward. Ordered that the same be granted.

Peter Smith, Kingston: Memorial praying for a grant of twelve hundred acres on the east end of the peninsula in front of the Township of Murray. Ordered that enquiry be made to know what lands he holds in the Province.

Thomas Ridout: Read his petition praying for eight hundred acres of land, viz: Lots No. 36 and 37 in the 2nd concession and No. 38 and 39 in the 3rd concession Township of Ancaster. Prayer of petition granted, and referred to the Surveyor General to assign the lands specified, if vacant.

William MacKay: Read petition praying for a piece of land of about the usual size of a town lot, situated on the west side of a lot lately laid out for the Kingston brewery, to be bounded on the north by the said brewery, on the east by a small run of water, on the south by the common and on the west by the top bank. Ordered that the same be referred to the Surveyor General.

Thomas Reynolds, Assistant Coms. Detroit: Read his memorial praying for lands on the River Thames between lot No. 19, 1st township and No. 6 in the 2nd township in front. Ordered that two front lots be granted petitioner on the north side of the river and one thousand acres for his family as near thereto as may be. Referred for that purpose to the Surveyor General.

Lieutenant Andrew McCan, 1st Batt. 60 Regiment: Prays for lands in Upper Canada as a Lieutenant in the late Queen's Rangers, reduced on half pay in 1783. Granted to the extent allowed to officers of his rank.

Pierre Michel Fortier: Read his petition praying for 1200 acres at the River Tobekok and a lot of 200 acres in the 2nd concession Township of York and a town lot in the Town of York. Ordered to be referred to the Surveyor General to report what lands have been already granted to petitioner.

Robert Clarke: Read his petition stating that he has had a grant for lot No. 18 in the 1st concession Ernest-Town since the year 1789, with the use of the waters for mills, &c. but has been prevented from erecting a grist mill thereon by an old saw mill there belonging to Government. Petitioner therefore humbly prays that the irons, &c. belonging to the aforesaid saw mill be granted to him and that he be allowed to take possession thereof. Ordered to be referred to the Receiver General.

William Chrysler: Read his petition praying for a lot No. 4 on the north side the road leading from Burlington Bay to the River La Tranche or Thames. Ordered that the prayer of the petition be granted and referred to the Surveyor General to assign the lot specified, if vacant.

Arthur Newman: Read his petition praying for lands on or near Long Point, Lake Erie. Ordered that no lands at Long Point are to be granted till further consideration.

Amos Fuller: Read his petition praying for 400 acres of land. Ordered to stand over for want of specification.

Capt. David McFall, late of the Queen's Royal Rangers: Read petition stating that the petitioner had already received, under the Instructions of 1783, 700 acres of land in the 2nd township south side the Ottawa River, and that in consequence of the orders of the Governor in Council 20th January, 1790, he had located two lots in the 2nd and two lots in the 3rd concession of the township back of Elizabeth-Town, and south-east corner thereof, containing 800 acres. Also, two lots in the 8th and two lots in the 9th concession, said township, and north-easterly corner thereof, containing 800 acres. Also, one lot in the 1st concession and one lot in the 2nd concession, said township, in the south-westerly corner thereof, containing 400 acres, and one lot and half in the north-westernmost corner of said township, containing 300 acres; a total of 2300 acres which, with the 700 acres above included, make 3000 acres. He prays that the above quantity may be .confirmed to him by letters patent with the benefit of any streams of water adjoining or running through said land. Ordered that the prayer of the petition be granted and referred to the Surveyor General to know whether the lands specified be vacant.

Elizabeth Wilson: In behalf of the family of John Lockwood, read her petition praying for lands. Ordered to stand over for want of specification.

William Markle: Read his petition praying for a grant of one thousand acres of land, viz: Lots Nos. 48-49 or 52, 1st concession and 32, 33, 2nd concession Township of Ancaster, or such other lots as may be found vacant, petitioner having already received one hundred acres of the above. Ordered that the prayer of this petition be granted and referred to the Surveyor General to assign the lands if vacant.

Adam Lewis: Read his petition which states that he has lived in township No. 5 for four years past and has five acres of land under improvement, that the land is near the mouth of the Thirty Mile Creek and called broken land; he also states that the people who live near him will not suffer him to clear any more, therefore prays for a further grant of land adjoining his improvement to enable him to live. The purport granted and ordered to be referred to the Surveyor General.

Ensign Henry Le Moine: Read his memorial praying for a grant of lands equivalent to that allowed to officers of equal rank in His Majesty's late 84 Regt. Granted to the extent allowed to officers of his rank.

Jacob Overhault: Petitioner represents that he has unadvisedly sat down upon and improved a lot of land in the fifth township near the Twenty Mile Creek, and which he understands belongs to Government, prays for a grant of said lot. Ordered to be referred to the Surveyor General.

Ralfe Clinch: Petitions praying a grant of lot No. 42 in the 2nd concession and lot No. 42 third concession of the Township of Ancaster. Ordered that the prayer of the petition be granted and that the Surveyor General be directed to assign the lots specified should they be vacant.

31st May, 1794.

At the Council Chamber, Newark.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; and Peter Russell.

The maps were produced by the Acting Surveyor General. Lieut.-Col. Butler and others personally attended and pointed out their claims to certain lands, the whole of which was referred to the Acting Surveyor General to report thereon.

Read the petition of Thomas Davis stating that he has obtained a grant of 200 acres of land in the eighth township, and prays for a further indulgence of land. Ordered that a further grant of 200 acres be made him and referred to the Surveyor General.

William, Benjamin and James Pickard: Petition praying that they may be confirmed in the possession of the lands which they have improved and live upon within the reserves of the Crown near the Four Mile Creek. Ordered to attend Council.

Anthony Slingerland: Petitions to be confirmed in the possession of the lot he lives on near the Town of Newmarket, containing 120 acres or thereabout. Ordered to attend Council.

Edward McMichael: Read his petition praying for lands in compensation for his services. Ordered: No lands can be granted as compensation for services.

Cossin Corus: Petitions stating that from Mr. Jones's late survey of Mr. Ball's improvement he will be deprived of a convenient outlet or road leading to market, &c. and prays that an outlet may be allowed him. Ordered to apply to the Surveyor of the Roads.

Thomas Collins Drew: Read his petition on behalf of himself and other grantees of the Townships of Rawdon and Huntingdon, requesting to know the terms and conditions of settlement of the said townships. Ordered that Mr. Drew be informed that the fees are not yet settled on, but will be and made public as soon as possible.

Read a letter from Mr. Coffin, Secretary to the Comander-in-Chief of the Province, to His Excellency the Lieutenant Governor, stating that some Indians of the Lake of the Two Mountains had complained we had given away lands upon the Ottawas River which belonged to them. Ordered that the Surveyor General be directed not to assign any more lands there for the present.

Thursday, 3rd June, 1794.

At the Council Chamber, Newark.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; and Peter Russell.

Read petition of sundry inhabitants living near the Landing praying that a road might be laid out from the Landing to the Four Mile Creek. Ordered that they be referred to the Road Bill passed last Session.

James Neville: Petitioner sets forth that he was induced to take up his family lands in a body and agreeably thereto had pitched upon three hundred acres on which he had built a house, cleared a meadow and made other improvements, and complains that a certificate for the improved lot has been given to another. Ordered that the petition be referred to the Land Board for their report on its merits.

William Rymal: Prays for lot No. 57 that lies in a point between Barton and Ancaster in 2nd concession line of Ancaster. Ordered that the prayer be granted and referred to the Surveyor General to assign the lot specified, if vacant.

Elias Long: Petitioner prays for a grant of lot No. 46, 3rd concession Township of Ancaster. Ordered that the Surveyor General be directed to assign the said lot to the petitioner, if vacant.

John Mills: Petitions for a grant of lot No. 21, first concession Township of Flamborough, on which he has made an improvement and, as the said lot is considerably broken and marshy, prays for a small addition of land thereto. Ordered that the petitioner be confirmed in his location, if not previously granted, with an addition of one hundred acres where the same may be contiguous, and that the Surveyor General assign the same.

Read a letter dated Newark, 26th May, 1794, as follows:—

Sir, I am directed by the Land Board to acknowledge the receipt of yours on Saturday last, and to say that so soon as Mr. Sheehan, Clerk to the Board, arrives, every exertion shall be made to comply with the request of the Honourable Executive Council. What the reasons are for not before complying, the Board cannot say.

I have the honour to be, Yr. most obed. hble. Servant.

(Signed) Ralfe Clinch,

Clerk pro tempore.

John Small, Esq.,
C.E. Council.

Read a letter from J. Williams, Clerk of the Council, Quebec, dated, Council Office, Quebec, 13th September, 1793, of which the following is an extract:

If a fee establishment for the Land-granting Department was settled for this Province I should take pleasure, with His Excellency the Lieutenant Governor's permission, in meeting the wishes of the Honourable Board of Council of Upper Canada. The subject is at present under the consideration of the Government here, but when the establishment is fixed upon I shall not omit, with His Excellency's approbation, transmitting to you, by the earliest occasion, an attested copy of it.

(Signed) J. Williams.

Read Isaac Morse's and others' petition for a township. Ordered that it stand over till he personally appears.

Edward Gahan: Petition for land. Set aside as obsolete.

Read Bemslee Peters' petition for 1000 acres of land near Kingston. Obsolete.

John McFarland: Prays for lands at Long Point and Burlington Bay. Ordered that no lands at present to be granted in the places specified.

Read D. W. Smith's memorial in behalf of O-May-ho-que, alias M. McKee. Ordered to lie by for consideration.

Peter Smith: Petitions for 1200 acres of land on the east end of the peninsula in front of the Township of Murray. Ordered that enquiry be made what lands he holds in the Province.

Elizabeth Andrews: Read petition praying for such a grant of land in behalf of her late husband, Capt. Andrews, Senior Naval Officer of Lake Ontario, as to His Excellency shall seem meet. Granted.

Cornet Roland Parks: Prayer for land near the Town of York. Granted, to the usual allowance of his rank provided he settles in the Province.

Jacob Servos and Peter J. Smith: Petitioners pray to look for some place at or near Toronto to erect a grist and a saw mill. Granted.

Margaret Springer prays for 1200 acres of unlocated lands. Granted four hundred acres for herself and two hundred for each of her family.

John Palmer and Joseph Richard Palmer: Pray for a donation of lands. Granted two hundred acres each.

John Harkimer, late a private soldier, prays for lands in the Township of York. Granted.

Edward Wright, late Quarter Master in the Queen's Rangers Cavalry, prays for a grant of land proportionate to his services. Granted.

Samuel Pinnock: Prays for land and provision in compensation of his losses. Lands granted.

The Heirs of the late Capt. John Hare: Pray for three thousand acres of land. Granted.

Frederick Scram: Petitions for lot Nos. 6 and 7 township No. 8 west of Burlington Bay in the late survey made by Messrs. Jones and Aitkins. Granted one lot.

W. B. Sheehan, late Lieut. in the 34 Regt: Prays for a grant of such portion of land as reduced officers have received. Granted.

Aaron and Daniel French: Petitioners pray for land near to York. Ordered that they have 200 acres each to begin with.

Nathan Barnum: Prays for lands near Turkey Point and Patterson Creek.

Ordered that 200 acres only can be granted the petitioner at present, it not being expedient to make settlements in that district at this time.

Jacob Grindstone, Seaman: Prays that he may be permitted to draw land when his term of servitude shall expire. Granted.

William Gannon: Prays for land forty miles above Fort Erie near to Morgan Deshan. Granted.

Sergeant Hendrick Deil: Prays for eight hundred acres in the District of Nassau. Granted five hundred acres.

Read the petitions for land in the Township of Ancaster:—

John Showers for lot No. 11, 1st concession,

Isaac Smith, for lot No. 10, 1st concession,

David Vanevery for lot No. 8, 1st concession,

John Aickman for lot No. 39, 1st concession, and Frederick Schram for lot No. 7, 1st concession. Granted on the express condition of the lots being immediately improved and houses built on each lot.

John Stone: Read his petition praying for land near Turkey Point, and for provisions. Inadmissible.

Barnabas, Eliphelet and Jeremiah Coonat: Pray for lots 27, 28, 29 and 32, 1st concession Township of Darlington, and

Roger Coonat, for the broken fronts of the above lots. Ordered that the lots in question being already granted, petitioners are directed to specify some other location.

Wm. Kitchen: Praying for lots Nos. 38 and 39, 2nd concession Township of Ancaster. No reasons specified why the petitioner should be invested with those lots.

Mary de Metrail, widow of Lewis de Metrail, late an Ensign in the 60th Regt: Petitioner prays for a grant of some of the waste lands of the Crown, according to the rank her husband held in the army. Ordered to stand over for want of specification.

Murdoch McLeod: Petitioner prays for a lease of lot No. 4 and its broken front, Township of Hope. Ordered that the petition be referred to the Receiver General.

John Smith (Cooper): Prays for lots Nos. 24 and 25 second concession Flamborough. No reason specified why Smith should be invested.

John McFee's petition: Referred to the Land Board, Edwardsburgh.

Timothy Thompson: Petitioner prays for islands opposite the land assigned him in the Midland District. Not admissible; islands being reserved.

Read the Proceedings of the Land Board for the Counties of Essex and Kent from the 11th April to the 10th October, 1793.

7th June, 1794.

At the Council Chamber, Newark.

Present: The Honourables William Osgoode, Chief Justice; Alexander Grant, James Baby, and Peter Russell.

Read a petition of Abner Mighells or Miles, praying for a tract of land six miles square on the River La Tranche. Ordered to stand over as the terms of granting are not yet fixed. Petitioner being disposed to accept of lands upon the general terms will be accommodated with 600 acres for self and family and 200 acres for each settler.

William McManus: Petition states that he has been in the Province many years and has improved lots Nos. 22 and 23 in the 2nd concession Township of Flamborough and prays for a grant of said lots. Ordered to be referred to the

Surveyor General to know whether the lots petitioned for have been granted; and to be located provided he has not received any land before.

John McBride: Petition for a town lot at York and his land to be as near as can be to the same. Granted and referred to the Surveyor General.

Wm. Dummer Powell: Petitioner prays for lots No. 6 in Stamford and Nos. 93, 94 and 95 in the Township of Newark. Prayer granted and ordered that the Surveyor General assign the same if vacant.

David Wm. Smith: Read petition praying for a gore of land beginning at the Mile Tree near Dr. Kerr's land running thence to the corner of the Town of Newark at lot No. 412, thence along the town line to a line run from the said Mile Tree to the One Mile Pond, and thence along the said line to the Mile Tree or place of beginning containing between eighty and one hundred acres. Ordered that the prayer of the petition be granted unconditionally.

John Cockle: Petitioner states that he has built upon and occupied a lot of 100 acres of land for eight years on the west side of the Four Mile Creek adjoining the lands of Mr. Servos, and prays he may be confirmed in the possession of the same. Ordered that the Surveyor General be referred to and that he be directed to assign the said land provided the petitioner shall be found entitled thereto.

Thomas Ridout: Read petition praying that lots Nos. 19 and 20 in the 3rd concession Township of Ancaster be assigned to him in lieu of two lots granted him in the Township of York. Ordered that the prayer of this petition be granted and that the Surveyor General be directed to assign the lots mentioned in the petition.

Hannah Mitchel: Petitioner prays for two hundred acres in the Township of Sugar Loaf East. Ordered that the same be granted.

Mary Burns: Petition for two hundred acres of land in the Township of Sugar Loaf East. Ordered that the Surveyor General be directed to assign the same.

Philip Beamer: Prays for 200 acres of land near to his brother's at the Forty Mile Pond, head of Lake Ontario. Ordered that the same be referred to the Surveyor General to assign 200 acres to the petitioner as near as may be to his brother's lot.

John Kehoe: Petition for land. Ordered that the Surveyor General do assign 200 acres to the petitioner.

Thomas Welch: Read petition praying for 3000 acres of land lying between the mouth of the Chippawa Creek, the head of Lake Ontario, the Indian Lands on the Grand River and Lake Erie. Ordered that the same be referred to the Surveyor General to assign two thousand, five hundred acres according to the prayer of the petition.

John McBride, sergeant, prays for a lot in the Town of York and that he may locate his land near the same. Ordered that the petition be granted according to the rank of the petitioner and that the same be referred to the Surveyor General for location.

Daniel Servos: Read petition stating that he is desirous of erecting a mill on the Four Mile Creek a small distance above the one he at present occupies and wishes to know on what terms a site may be obtained for that purpose. Ordered that the petition be referred to the Receiver General.

James Smith: Read petition stating that he had obtained a grant of His Excellency, Lord Dorchester, for 700 acres of land to be taken at any place not already granted, that he came to the River Trent where he was informed the lands were vacant and there took lots 1, 2, 3, and 4, and began his improvements on the 2nd lot on the north side of the river, and prays that the same may be confirmed to him. Ordered that the Surveyor General be directed to report on the claim of the petitioner and the petition be referred to him for that purpose.

Harcan Lyons: Prays for 200 acres at the head of the Lake. Ordered that the Surveyor General be directed to assign 200 acres to the petitioner.

Christopher Robinson: Petition for lots Nos. 101, 102, 103, 104, 105 and 106 in the Township of Ameliasburgh as part of the lands he may be entitled to. Referred to the Surveyor General to enquire whether any lands have been granted to the petitioner and that he be directed to assign the lots prayed for, in case he shall be entitled to the same.

Robert Innes: Prays for 500 acres in the Township of Exeter to the west of the Grand River. Ordered that three hundred acres be assigned to the petitioner.

John Hansaker: Petition for lots Nos. 46 and 47, 5th concession Ancaster Ordered that the same be referred to the Surveyor General to enquire whether the petitioner has already received any lands and if not and the lots petitioned for be vacant, that 200 acres be granted the petitioner.

Robert Clarke: Petition for leave to erect a mill, having been referred by Order of Council of the 27th May last to the Receiver General for a report thereon, report is this day made by the Receiver General that the mill site applied for belongs to the Crown, a saw mill having been erected thereon at the public expense and since leased to Mr. Donald McDonell of Kingston. Consequently this petition is inadmissible.

Abraham Maybee: Petitioner states that he has improved lot No. 21, 1st concession Adolphus-Town on which lot and the unoccupied town land adjoining are natural conveniences for erecting a saw mill; therefore prays that one acre on each side of the creek of the unoccupied town land adjoining petitioner's lot may be granted to him for the purpose of erecting a saw mill thereon. Ordered that the same be referred to the Surveyor General and if no objection occurs that the prayer of the petition be granted.

Read the Surveyor General's report on Thomas Duggan's petition. Ordered that the Surveyor General do make an assignment conformably to his report.

Stephen Burrit: Read the report of the Surveyor General and ordered that, as it appears the lands in question have been located, the petition be dismissed.

Alexander Chisholm: Read the Surveyor General's report and ordered that the petition be dismissed.

Coson Corus: Petition having been referred according to Order of Council of the 31st May, report is made that the lands in question are already granted.

Asa Holmes: Petition for 1200 acres of land opposite the mouth of Beaver Creek on the south side of the Chippawa River. Ordered that the Surveyor General do assign five hundred acres to the petitioner.

Tuesday, 10th June, 1794.

At the Council Chamber, Newark.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; James Baby, and Peter Russell.

Hugh Munro: Prays for the vacant point of land in the front of the town parks annexed to the town lots of Johnstown. Ordered that the same be referred to the Receiver General and that public reserves be granted under such rent as shall be approved by the Receiver General for no longer period than seven years or till such time as it may be wanted for public purposes.

Robert Wilkins: Prays for a grant of land in the rear of the seminary land at New Johnstown, Edwardsburgh, of about 500 acres. The Council admit of the quantity, but ordered that the Land Board be referred to for a report upon the same.

Esther Ross, widow of Lieut. John Troup: Her petition states that she had obtained a grant of 1000 acres of land and prays they may be located to her as follows:—lot No. 22-24 and half 26, 8th concession Sidney; lot No. 36 and half 38, 4th concession Camden; lot No. 13, 7th concession Richmond; and also prays for a further grant of one thousand acres in the township rear of Kingston. Ordered that the prayer be granted and the Surveyor General be directed to locate the whole together.

Robert Hamilton: Petition sets forth that the petitioner in the year 1788 in consequence of a memorial to His Excellency, Lord Dorchester, stating his services in the establishment of this settlement and he did receive from His Excellency an order for 700 acres of land, being at that time the full quantity allowed for a reduced Captain; that the petitioner on his own account as well as on account of his family of seven sons, who most probably will all remain in this country, prays that such additional quantity of land be granted to him as may be thought proper. His Excellency and the Council being apprized of the advantages derived to this District in various instances from the public spirit and exertions of the petitioner, both as a magistrate and in his private capacity, think themselves fully justified in supporting his claim upon the most equitable principles and therefore resolved that a tract of land to the extent of three thousand acres be granted to the petitioner and that the Surveyor General be directed to assign the same in such vacant spot as the petitioner shall point out.

Wednesday, 11th June, 1794.

At the Council Chamber, Newark.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; Alexander Grant, James Baby, and Peter Russell.

His Excellency informed the Board that he called them together to communicate his wishes that a Supreme Court of Judicature might be established in this Province, and that altho' he was empowered by his Commission to establish from his own authority such courts of justice as he may see necessary, it was notwithstanding his desire that this measure should be carried into execution by an Act of the Legislature, and that the Chief Justice had in consequence of his request drawn up a Bill for that purpose which would be brought into the Upper House this day.

Saturday, 14th June, 1794.

At the Council Chamber, Newark.

Present: The Honourables William Osgoode, Chief Justice; Alexander Grant, James Baby, and Peter Russell.

Allan McDonald, late Sergeant in Col. Butler's Rangers: Read petition for lands at the Sixteen Mile Creek. Ordered that the Surveyor General be directed to locate him four hundred acres.

Jabez Collvir: Prays for lands. Ordered that 1000 acres be granted for himself, and 200 for each of his three sons who came in with him.

Wm. Dummer Powell: Petitioner prays for one hundred acres of land in the gore or vacant space between the lines of Stamford and Newark in lieu of lot No. 6 in Stamford. Ordered that the same be granted and that the Surveyor General do locate the petitioner in the same.

According to order, the Acting Surveyor General produced a report of survey of a line drawn between the lands of Anthony Slingerland and Hermanie's house, with a proposed arrangement of the different quantities of land to be assigned to the parties therein named.

Colonel Butler: The report herein following being read, the Council approve thereof and direct it to be carried into execution, viz: The Honourable Council sensible of Col. Butler's merits, regret that the limited quantity of land in the tract in question will not allow them to assign him an equal quantity with those who are entitled under a prior Order of Council, but order that he may be at liberty to locate five hundred acres in any vacant tract; and that he be confirmed in the possession of that part of his property which runs into the boundaries or limits of the Town of Newark.

Mr. Swayzie's petition to stand over.

Ezekiel Younglove: Prays for a further grant of land. Ordered that the Surveyor General be directed to assign the petitioner five hundred and fifty acres of land in addition to what he has received.

Commodore David Button: Prays that he may be granted the quantity of land he is entitled to as Commodore. Ordered that the petitioner have a grant of five thousand acres and the Surveyor General be directed to locate him.

James Muirhead, Surgeon: Prays for a grant of 2000 acres of land. The Council, duly sensible of the merits of the petitioner, wish to go to the extent of their power and order that twelve hundred acres be granted to him.

Samuel De Riemer: Prays for 25,000 acres of land about forty miles above the Chippawa. Ordered 1000 acres for himself and 200 acres for every settler to the extent of thirty.

Wm. Davis: States that he has improved lot No. 32, 8th concession of the 7th township near Burlington Bay and prays that the same be confirmed to him; and an additional grant having a numerous family. Ordered that he be confirmed in his present lot and have a further grant of 600 acres for himself and two sons, contiguous to the same, making in all 700 acres.

Robert Kerr: States that he had been at some trouble and expense in getting a tract of land surveyed in 1790, and that afterwards he obtained a grant of near 1000 acres of land on the north side of bay. He prays that the same may be confirmed to him. Ordered that the prayer of this petition cannot be granted.

David Magan: States that he eight years ago came into the Province and began a settlement which since appears to have been on lots Nos. 13 and 14, 1st concession of Township Sugar Loaf West; that he has received from the Land Board a certificate for lot No. 14, but as his house and barn are on lot No. 13, he prays that the said lot may be confirmed to him. Ordered that the Surveyor General assign lot No. 13 to the petitioner if vacant.

Jacob Miner: Prays for an additional grant of two hundred acres in addition to two hundred he has received and that the same may be granted him in the Township of Sugar Loaf West. Ordered that he receive a further grant of two hundred acres.

Preserved Cooley: Prays for a location of land to accommodate twenty families. Ordered a grant of five hundred acres for himself and 200 for each of his three sons, James, Andrew and Preserved, and 200 to his son-in-law, Jno. Manning.

Thomas Davis: Petitions for an additional grant of land. Ordered that a further grant of 200 acres be assigned to him.

Sergeant John Hannah: Prays for such a grant of land as he may be entitled to. Ordered to stand over with the rest of the petitions for York.

John Ashton: Prays to know the event of a petition presented by Alexander Wright, who personally attended in behalf of himself and very numerous associates praying for a township northward of Kingston; and two upon the River Rideau. Ordered that the Acting Surveyor General examine and survey the same and report accordingly; and that the petitioner will be confirmed in the possession of 1200 acres of land, and each settler whom he brings in will have 200 acres in a township on the River Rideau marked by the Surveyor General for Alexander Wright and associates.

Samuel Stafford will likewise be confirmed in his 1200 acres and each settler in 200 acres in the other township on the River Rideau marked by the Surveyor General under the name of Alexander Wright.

These persons upon their coming into this Province must take the oaths prescribed and upon their application to the Surveyor General will receive an assignment of their respective lands.

Capt. Richard Porter: Prays for a piece of land about one acre square adjoining a point known by the name of Annesley's Point, Town of Kingston, hitherto reserved for erecting a work of defence. Inadmissible.

Capt. Richard Porter: Prays for 1200 acres of land in the Township of Ameliasburgh, Midland District. Ordered that the Surveyor General be directed to locate the same to the petitioner if vacant.

Alexander McDonell: A petition was read stating that His Excellency in Council had been pleased some time last summer [on the 31st of August] to grant three thousand acres of land to the heirs of the late Captain Allan McDonell of His Majesty's 84th Regiment and two thousand acres of land to the said Alexander McDonell as Lieutenant in the late Corps of Rangers, in consequence of which the petitioner had authorized his brother, Angus McDonell, to receive an assignment from the Acting Surveyor General of the said five thousand acres of land; that Angus McDonell having accordingly given in a requisition and specification, was informed by the Acting Surveyor General that the lands specified and prayed for could not be granted, the same being part of a parcel of land reserved in the event of M. Desjardins and other French emigrants coming into this Province to settle, M. Desjardins having made election thereof for that purpose. But it now appearing that M. Desjardins and the emigrants purposing to accompany him have relinquished all intention of coming into this Province, the petitioner prays to have an assignment of the lands described and set forth in the specification and requisition of his brother and agent to the Acting Surveyor General, as abovesaid. Ordered that the prayer be granted and referred to the Acting Surveyor General to receive the assignment.

Edward McMichael's petition sets forth that he has for three years past settled on land between the Town of Newark and the Four Mile Creek. He prays for a proportionable indulgence and grant in the same as have been made to Colonel Butler and others settled on the said tract of land. Ordered to be referred to the Surveyor General.

Robert Land: Prays for land in compensation of his losses. He has received 300 acres at Burlington Bay. Ordered that he shall have a grant of 200 acres for each of his sons.

Read a memorial of the Acting Surveyor General in behalf of the Deputy Surveyors praying to be put upon the same footing as the Deputy Surveyors of the Province of Lower Canada from the month of June, 1792. Ordered that they be put on the same footing as the Deputy Surveyors of the Lower Province from that time.

[Memo. A return of grants to 26th June, 1794, sent to the Surveyor General. J.S.]

Saturday, 21st June, 1794.

At the Council Chamber, Navy Hall, Newark.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; Alexander Grant, James Baby and Peter Russell.

The Honourable AEneas Shaw took the oath and his seat as a member of the Executive Council. He also subscribed to the following. (See page 182).

The Attorney General laid before His Excellency in Council the deposition transmitted to him by Major Smith, Commandant of the Garrison:

Deposition of Sergeant Thos. Lawson of the 5th Regiment of Foot:—

That on Sunday evening the 31st of May last, about eleven o'clock, he with several other non-commissioned officers and private men of the said Regt. and Queen's Rangers were ordered on command in pursuit of a boat that had passed the Garrison that night, on board of which it was supposed that there were smuggled goods going to the States of America. That he the said Sergeant Thos. Lawson and one private man of his party being some distance in front of the rest of the party on the lake side, came within about thirty yards of a boat or canoe, and saw the men on board push her off from the shore, and immediately after discharged a piece at him loaded as he imagines with shot from the rattling it made against the bushes; that in a short time after they fired a second time at him, the contents of which fell behind him, that he then fired upon them, seeing that they were endeavouring to make off into the lake; that the private man that was along with him fired directly after him, and the rest of his party coming up they fired also; that he called several times to the people on board to return to shore, but they paid no attention to his orders; that after several shots had been fired at the boat the people on board cried out, "For God's sake cease firing and we will put the boat on shore;" that his party then gave over firing, but finding they were deceived and that the boat was going farther into the lake instead of returning to shore as the men on board had promised, they commenced firing again, which they continued till the boat was out of their reach.

That as he and his party were returning towards the Garrison they met Mr. McNabb, Superintendent of Inland Navigation with, two boats with soldiers on board of each; that he and one of his party went on board of the boat that Mr. McNabb was on board of, that they went as far as the Twelve Mile Creek where they saw two Americans and a negro man but the latter informed him that the boat they belonged to had returned to the Four Mile Pond to take in furs which they were to take to the States of America.

That he saw the above-mentioned three men take three boxes and some provision into the wood where they hid them; that on their return to the Garrison they met the boat returning from the Four Mile Pond which Mr. McNabb stopped and examined, but did not find any goods on board that were seizable.

Whereas His Excellency gave directions that a reward of £50.0.0 Quebec Currency should be inserted in the Upper Canada Gazette, as hereinunder:—

GEORGE the THIRD, by the Grace of God of Great Britain, France and Ireland, King, Defender of the Faith, etc.

Whereas by certain information it appears that several perons in the night of the 31st of May last about eleven o'clock passed by the Garrison of Niagara, in a boat or batteau, carrying with them as it is presumed contraband goods; and upon being hailed by the sentinel, refused to return an answer: Whereupon Sergeant Thomas Lawson of the 5th Regiment of Foot, and a party of the privates of the said Regt. were dispatched to stop the said boat or batteau and detain the persons till further enquiry should be made, and

Whereas it appears that the persons, or some or one of them upon being again challenged by the said Sergeant Lawson not only refused to come on shore, but fired upon the said Sergeant and his party, and again in a short time afterwards fired a second time, in defiance of the laws and in contempt of the peace of our Lord the King.

Now I do hereby give notice that if any person or persons will give information to any of His Majesty's Justices of the Peace of the said party or any of them that were in the said boat or batteau, so that they or any of them may be brought to justice, or if any one or more of the said party will give information to any one of His Majesty's Justices of the Peace of the person or persons that fired as aforesaid upon the said Sergeant and his party so that they may be brought to punishment, he or they shall receive upon conviction of the offender or offenders the sum of Fifty Pounds Quebec Currency: And if the informer or informers should have been of the said party in the said boat or batteau other than the person or persons that fired as aforesaid, he or they shall receive the King's pardon upon such information and conviction as aforesaid, besides receiving the above reward.

Given under my hand and seal this 21st of June, 1794.

John Graves Simcoe, Esquire,
Lieut-Governor and Commander
in-Chief of the said Province.

Government House,
Navy Hall,
Upper Canada.

The following petitions were also read:—

John Colver: Petition for four hundred acres of land. Ordered that the same be granted.

Aaron Colver: Petition for four hundred acres of land. Ordered that the same be granted.

Jethrow Jackson: Petition for land having served in the Commissary's Department. Ordered that he shall have a grant of six hundred acres in addition to the two hundred already received and to specify to any of the Land Boards where he wishes for his location.

Thos. Ghent: Petitions for a grant of two lots of land Nos. 30 and 31, 7th concession seventh township. Ordered that it be referred to the Acting Surveyor General.

Jonathan Spragues: Petitions for one thousand acres of land. Ordered that the petitioner have a grant only of four hundred acres.

John Barbour: Petitions that His Excellency will allow him the usual allowance of lands granted to persons in his circumstances, being a man with a family,—a wife and four children. Ordered that the petitioner have a grant of six hundred acres.

James Steward, in behalf of himself and five sons, James, Taylor, Benjamin, John, and Zenogh, loyalists, humbly request that Your Honours will grant him and his family a location of land as large as you shall judge their sufferings merit. Ordered that the petitioner shall have a grant of five hundred acres for himself and two hundred for each of his sons.

Ebenezer Whiting, Augustus Whiting, and associates: Petition for forty thousand acres of land in one body upon and below the middle forks of the River La Tranche, upon such terms and conditions as may be deemed consistent. Ordered that Ebenezer Whiting shall have a grant of twelve hundred acres and that his son, Augustus Whiting, shall have a grant of six hundred acres; and two hundred acres to each of his other sons, and a reserve made for his associates as they come in.

David Lee, Samuel Strait and Stephen Washbourn: Petitioners pray Your Excellency will grant to each of them such a quantity of land as Your Excellency shall think just and equitable. Ordered by His Excellency and Council that they have a grant of one thousand acres each.

John Styes: Prays to be confirmed in a lot on the Short Hills, tenth township, which he has been upon upwards of five years, and that he may have a grant of two hundred acres altogether when the same shall be surveyed. Ordered that it be referred to the Acting Surveyor General.

Richard Cartwright, Jun.: Petitioner sets forth that he came to this Province in the year 1787, where he hath ever since resided; that he has a wife and three children and since the year 1787 he has had the honour of acting as a Magistrate and Member of the Land Board for the Midland District and that he hath hitherto received only one hundred acres of land; therefore prays Your Excellency will grant him such further quantity as you shall deem proper and that in part of this he may be allowed to have two small islands situated in what is called the Hay Bay, which lies within the Township of Fredericksburgh and Adolphus-Town in the Midland District.

The Council having resolved not to grant any of the islands, that part of Mr. Cartwright's petition cannot be complied with. His Excellency and the Council being apprized of the advantages derived in various instances from the public spirit and exertions of the petitioner both as a Magistrate and in his private capacity think themselves fully justified in supporting his claim upon the most equitable principles, and therefore resolve that a tract of land to the extent of three thousand acres be granted to the petitioner and that the Surveyor General be directed to assign the same in such vacant spot as the petitioner shall point out.

Peter, Jacob, Adam, and Abraham Bowman, and Abraham Defries: Petitioners pray for the lands due to them, having served His Majesty in the last war. Ordered that they receive three hundred acres each.

17th June, 1794.

At the Council Chamber, Newark.

Present: The Honourables William Osgoode, Chief Justice; Alexander Grant, James Baby, and Peter Russell.

Read a memorial from the Hon. Peter Russell, Receiver General of this Province, to His Excellency the Lieutenant Governor in Council, stating that the Receiver General of Lower Canada has been allowed to charge one hundred pounds per annum for office rent and a clerk, and praying that the like allowance may be made to him. And having also read a letter from the Receiver General of Lower Canada to Mr. Russell dated the 27th of last month, in which he informs him that he charged and was allowed in his account £100 per annum for office rent and a clerk, resolved that the prayer of the memorial being perfectly reasonable, the Council do approve of the Receiver General making the charge aforesaid.

Read a memorial from John Small, Clerk of the Honourable Executive Council, to His Excellency the Lieutenant Governor in Council, that from the great accumulation of business in his office, he most respectfully intreats that clerks may be allowed him at the same rates as in the lower Province. Resolved that the prayer of the memorial be granted.

The Council were pleased to examine the General Account Current of the Hon. Peter Russell, Receiver General for the Province of Upper Canada for the half year ending 31st December, 1793, amounting to three thousand, five hundred and twenty-five pounds, nineteen shillings and three pence half penny sterling (dollars at 4/6) expended, which the Board find properly authorized and vouched; therefore certify to the best of their knowledge and belief, just and true. The several sums received are regularly carried to the credit of Government and the balance remaining in the hands of the Receiver General on the 31st December last is six hundred and sixty-six pounds, eight shillings, sterling.

Also an account for office rent and a clerk from the 1st June, 1792, to the 1st January, 1794, at the rate of one hundred pounds per annum, amounting to one hundred and fifty-eight pounds, six shillings and eight pence, sterling.

By received in part, 31st December, 1792, twenty-one pounds; due 1793, thirty-six pounds, which leaves a balance due to the Receiver General of one hundred and one pounds, six shillings and eight pence, sterling.

The Council were pleased to examine the General Account Current of D. W. Smith, Esq., Acting Surveyor General, from the 10th of April, 1793, to 10th October, 1793, amounting to two thousand, ninety-six pounds, twelve shillings, four pence half-penny. The Council find the expenditure thereof properly authorized and vouched, certify the same to be regular and orderly and to the best of their knowledge and belief, just and true; leaving a balance in the hands of the Acting Surveyor General of one hundred and twenty-five pounds and seven pence half-penny due to Government. (dollars at 5).

The Council were pleased to examine the account of the Attorney General, which amount for travelling expenses Western Circuit to forty-five pounds, and Midland and Eastern District to forty-five pounds, and also an account of fees from 10th July, 1793, to 31st December, 1793, amounting to forty-two pounds, six shillings, sterling. The Council find the same to be properly authorized and vouched, certify the same to be regular, orderly and to the best of their knowledge and belief, just and true.

The Council were pleased to examine the account of David Burns, Esq., Clerk of the Crown, for travelling expenses on the Western Circuit, twenty-five pounds, and on the Midland and Eastern Circuit, twenty-five pounds sterling. The Council find the same to be regular, orderly and to the best of their belief, just and true.

The Council were pleased to examine an Abstract of Contingencies in the Office of His Excellency the Lieutenant Governor from 1st July to 31st December, 1793, amounting to four hundred and thirty-four pounds, thirteen shillings, and one penny half-penny; the balance remaining in His Excellency the Lieutenant Governor's Office amounting to three hundred and eight pounds, thirteen shillings and five pence three farthings, sterling, which the Council find to be properly authorized and vouched, therefore certify the same to be regular, orderly and to the best of their knowledge, just and true.

And also an account due to His Excellency Lieutenant Governor Simcoe, amounting to thirty pounds ten shillings, Halifax Currency, which the Council certify to be regular and to the best of their knowledge, just and true.

The Council were pleased to examine the account of Wm. Jarvis, Esq., Secretary and Register, amounting to thirty-two pounds, fifteen shillings and ten pence, which the Council find to be properly authorized and vouched, therefore certify the same to be regular, orderly and to the best of their knowledge, just and true.

The Council were pleased to examine the account of the Hon. Wm. Osgoode, Chief Justice, for travelling expenses for the Eastern District, amounting to one hundred pounds sterling, which the Council certify to be regular and to the best of their knowledge, just and true.

The Council were pleased to examine the account of Lieut. Pilkington, Engineer, in his Department, as under (Quebec Currency):—

Disbursed at York, between the 25th September and the 24th December, 1793, inclusive. £56, 16, 0.

Ditto, in the Store-Keeper General's Department for several services at York, 1793. £101, 16, 4.

Ditto, building of a gun-boat, the service commencing 6th July and ending 24th November, 1793. £91, 16, 9¾.

Disbursements attending the Store-keeper General's Department at Niagara for services at Colonel Butler's Barracks and Navy Hall, between 25th December, 1792, and 24th September, 1793, £293, 11, 1¼.

The Council find the expenditure thereof properly authorized and vouched, therefore certify the same to be regular, orderly and to the best of their knowledge and belief, just and true.

The Council were pleased to examine the General Account Current of John Small, Esq., contingencies incurred in the Council Office to the 31st December, 1793, amounting to forty-six pounds, six shillings and twopence ¼, which the Council find properly authorized and vouched, therefore certify to the best of their knowledge and belief to be just and true.

Richard Pollard, Sheriff of the Western District, states that he hath unavoidably laid out several sums of money in the necessary discharge of his duty, and lays the same before Their Honours: And that he hath also been at other considerable charges in the further execution of his duty, which he humbly prays Their Honours to take into consideration and make him such further allowance as may seem meet.

The Council refers the petitioner to the Magistrates of the District in Quarter Sessions assembled who are by law entitled to appropriate the monies arising from the District Assessments, and to discharge all demands which relate to the business of the District.

JOHN SMALL.

Saturday, 28th June, 1794.

At the Council Chamber.

Present: The Honourables William Osgoode, Chief Justice; Alexander Grant, Peter Russell and AEneas Shaw.

Mr. Alexander McDonell took the Oaths of Allegiance and Office, being appointed Sheriff for the Home District.

James Macaulay, Surgeon: Memorialist for lot No. 65 on the road leading from York to Lake Simcoe and four hundred acres in the rear of the above lot. Ordered that the same be granted.

John Wilson: Memorialist is in possession of a lot of one hundred acres adjoining the reserve lands on Mount Dorchester, and prays to be allowed to exchange the said lot for an adjoining lot in the reserve. Ordered to be referred to the Acting Surveyor General.

James Everson: Petitioner having located lot No. 4 on the front concession about 30 miles up on the south side Chippawa Creek, opposite Mink Creek, prays for a grant of the same. Ordered that the same be granted and referred to the Surveyor General.

Henry Miller: Petitioner having served as a soldier last war prays for lots Nos. 52 and 53 in the fourth concession, Township of Ancaster. Ordered that the same be granted if vacant.

Christian Stoner: States that he arrived in this Province about four years since with a wife and five children, and that he has received the front halves of lots Nos. 29 and 30, third concession, Township of Sugar Loaf East, that he has made valuable improvements on said lots nearly in equal quantities and a considerable part of said improvements remain uncovered by the two front halves aforesaid. Prays for a further grant of two hundred acres for himself and family in the same township. Ordered that the prayer of petition be granted and referred to the Acting Surveyor General.

W. M. Casey settled on lots Nos. 24 and 25 in the fourth concession on a point of land where he found a small vacancy of about 26 acres, convenient for building upon, prays the same may be granted him for that purpose, as there is no convenient situation on either of said lots. Referred to the Surveyor General to report thereon.

Adam Green, in behalf of himself, wife and ten children: Petitioner purchased an improvement on Stoney Brook at the head of Lake Ontario containing one hundred acres; states that he has been a great sufferer during last war in various instances, and prays for a further grant of land. Ordered that the petitioner shall receive three hundred acres in addition to what has been already granted to him.

Peter Ball, Lieut. late Corps of Rangers, states that he has received certificates from the Land Board for four hundred acres in township No. 3, and by an Order of Council 200 acres in township No. 1, and being desirous to locate the remainder of his lands and also 200 acres for his wife, and 200 acres for his eldest son, prays that he may locate his lands where they can be found vacant. Ordered that the same be granted and referred to Surveyor General.

Alexander and Sarah Westbrook: Petitioners are the son and widow of a loyalist who served during the war in the Indian Department under Captain Brant. Prays for four hundred acres of land in the Township of Ancaster. Ordered that the same be granted.

Thomas Dakers, late a soldier in Col. Butler's Rangers: Having taken possession of a spot of land on the Sixteen Mile Creek adjoining a due west line run by order of Col. Butler, prays that the same may be confirmed to him together with his wife's, she being the daughter of a loyalist who served in the time of the war. Ordered that the above be referred to the Acting Surveyor General.

William Jarvis: Petitions for his lands as Cornet in the late Queen's Rangers Dragoons. Ordered that the prayer of the petition be granted.

John Hitchcock: Prays for a gore of land between the Sixteen Mile Creek and the Mud Creek, crossing the 20 Mile Creek adjoining the east side of the Arrow Cave, containing four hundred acres. Ordered that the prayer of petition be granted and referred to the Surveyor General.

Arch'l Thomson, of Kingston: Possesses a front lot in the town, No. 34. Prays for a grant of the water lot parallel thereto for the purpose of building a wharf and store upon. Ordered that the petition be granted on the same terms imposed on other inhabitants.

William B. Peters: Petitioner desirous of becoming an inhabitant of this Province, prays for a front lot in the Town of York and one hundred acres of land adjacent. Ordered to stand over till York petitions are taken into consideration.

John McNabb: Memorialist joined the Royal Army at the commencement of the late war and served in different capacities. Prays that his case maybe taken into consideration and grant him an additional allowance of land to put him on the footing of reduced officers. Ordered that eleven hundred additional acres be granted to make up two thousand.

Samuel Williams: Petitions setting forth that he joined His Majesty's Troops at the commencement of the American War, that he was Lieutenant of Artillery in the Corps of Loyalists commanded by Major Ward, that he has received three hundred acres of land by order of Your Excellency, and prays for a further grant. Ordered that three hundred additional acres be granted the petitioner.

Lenedar Barns: Petitioner is desirous of becoming a settler in this Province into which he is lately come, and prays for a grant of four hundred acres of land at the head of the Lake. Ordered that the petitioner shall have a grant of three hundred acres.

Parshall Terry: Petitioner prays to hold five hundred acres of land in one body, one hundred and fifty of which are in front, being No. 4 and half No. 3, in the first concession below Black Creek on which he now dwells and also to hold seven hundred acres in the forks of Black Creek, there being plenty of vacant lots. Ordered that the prayer of the petition be granted.

Jacob Decow: Petitioner has resided four years in the Province on some land of his son. Prays Your Excellency will grant him an allotment of land and that he may have the same at the short hill. Ordered that 200 acres be granted the petitioner.

J. B. Rousseaux: Petitioner having served as interpreter in the Indian Department from the year 1775 to the year 1786, conceives himself entitled to two thousand acres, and have only received five hundred; prays that he may take five hundred between Lake Simcoe and York and one thousand on some unlocated land of the Crown. Ordered that the petition be dismissed.

Chas. Trump: Petitioner is gunner to the Onadoga. Prays for the same quantity of land as allowed to others in his station. Ordered that three hundred acres be granted the petitioner.

Moses Mount: Petitioner served His Majesty during the American War in Lieut. Col. Butler's Corps as Sergt. Major; that he has never located any land and prays that the allotment of land his services may have entiitled him to, may be granted him in the vicinity of the Mohawk Village, in a gore between the Township of Exeter and the Indian Line, or in such other place as Your Excellency may seem meet. Ordered that five hundred acres be granted the petitioner, and referred for location to the Surveyor General.

John Laughton: Petitioner sets forth his services under Government for the space of twenty-three years, conceives himself entitled to a certain portion of land, and prays for a grant of twelve hundred acres in the first concession in a place called the Bay of Long Point, and should such land not be grantable, prays for the like proportion on the River La Tranche, to be in the first concession adjoining the land located by the Hon. Alexander Grant. Ordered that the prayer of the petition be granted.

Angus McDonell: Petitioner prays for leave to exchange one thousand acres of land granted to him in the Township of Flamborough for lands on the western end of the marsh called Coot's Paradise. Ordered that the prayer of the petition be rejected.

Peter Van Alstine, for James Smith, Esquire, Memorialist sets forth that James Smith has not long since memorialized Your Excellency in Council for land on the River Trent seven hundred acres as follows—beginning at a certain stake standing on the north side of the said river[1] running forty chains north west as the river runs one hundred and seventy-five chains, from thence south-west till it strikes the said river, which will contain seven hundred acres. Ordered that the prayer of the petition be granted and referred to the Surveyor General respecting the location.

Francis Scott, William Lamson and Joachim Denauth: Petitioners set forth that they waited upon the majority of the Land Board of New Johnstown in Edwardsburgh, for leave to build a saw mill on the stream that leads through the town, which was granted verbally, the petitioners having put themselves to great expense to purchase irons necessary; Hugh Munro, Esq., took the advantage of erecting the frame of a small house at or near the spot where they began to prepare the ditch without the consent or approbation of the Land Board. Your petitioners humbly pray Your Excellency will take the same into consideration and grant them liberty to complete their intended mills. Ordered that the above be referred to the Land Board of Johnstown.

Allen Patterson: Petitioner begs to represent to Your Excellency in Council that his wife obtained a certificate for two hundred acres from the Land Board of Luneburg, now called the Eastern District, which land is located in the Township of Young, in the County of Leeds, the west half of lot No. 7 and the east half of lot No. 8, first concession. Prays that the same may be granted to his wife in free and common socage under the Great Seal of the Province. Ordered that it be referred to the Surveyor General to report specially thereon, as a claim has been brought forward by Capt. Jessup.

Joseph Bunbury, Captain, 5th Regt.: Memorialist had the honour of commanding His Majesty's post at Kingston for some time, in consequence of which he became a member of the Land Board and assiduously attended that trust with due attention to the welfare of His Majesty's Province. Prays for a grant of land such as Your Excellency may think meet. Ordered that the petitioner shall have a grant of twelve hundred acres.

Peter Simmerman, and his associates, John Linneberry, Adam Fris, George Book, William Mingle, Adam Simmerman, James Dawdy, Jun., and Christopher Linneberry. Your petitioners having lately come into this Province to settle therein, and having accordingly made application to Acting Surveyor General of this Province, who directed them to search for such ungranted lands as they would wish to sit down upon, and pitched upon a tract of land between the Twenty Mile Creek, and the place commonly called the Hurricane, in the County of Lincoln. The said tract of land being bounded in front by the northernmost concession line of the survey of Mr. Lewis Grant, and running thence north and bounded to the west by the lands of James Conolly, in the place commonly called the upper settlement Twenty Mile Creek. Ordered that the petition be granted and referred to the Surveyor General to locate.

Hugh McDonell: Petitioner is informed Your Excellency has thought proper to reward the surveyors in the employ of Government by an allotment of twelve hundred acres of land and that your petitioner has for a series of time acted in that capacity, prays that he may participate the reward. Resolved that as the allotment given to surveyors was in order to put them on a respectable footing on account of their services and under the presumption they had no other claims, this indulgence was not meant to be extended to such as had already received His Majesty's bounty in any other capacity.

Wm. Bond: Petitioner wishes to become an inhabitant of this Province and prays for such a quantity of land as Your Excellency shall think fit. Ordered that the petitioner shall have a grant of six hundred acres.

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[1] Description incomplete in original document.

Examined the Minutes of the Land Board for the Counties of Grenville and Leeds, Eastern District, from the 17th November, 1792, to the 12th March, 1793. Particulars of those recommended to His Excellency in Council as under:

John Pollier, a Fifer in the late Royal Rangers commanded by Major Jessup. He has received one hundred acres and conceives himself entitled to three hundred more and is recommended by the Board to His Excellency in Council. The Council are willing to adopt the recommendation of the Land Board to the utmost extent conformably to the rules already observed whereby a fifer has no other claim than as a private soldier. They therefore think him entitled to no more than two hundred additional acres.

Owen Heron: Sergeant Major in the late 84th Regt., conceives himself entitled to four hundred acres and prays it may be granted him. The Board, having examined into his pretentions, grant him two hundred acres and recommend him to His Excellency the Lieut. Governor in Council for 200 acres more. Ordered that the recommendation of the Board be adopted and that 200 additional acres be granted.

Allen McDonell, Captain Lieutenant in the late Royal Regiment of New York. Petitioner has drawn twelve hundred acres and prays for eighteen hundred acres more to put him upon an equal footing with the late 84th Regt., in Oxford, lots Nos. 1, 2 and 3, first, second and third concession, and prays that it may be granted him. Ordered that the recommendation be adopted.

Francis Laremier: Petitioner served as a Subaltern Officer in the late American War and has drawn only five hundred acres of land, and prays for fifteen hundred acres more beginning three miles below southeast corner of Marlborough, the width of three lots, and to extend back to make fifteen hundred acres. Is recommended to His Excellency. Ordered that the recommendation be adopted.

Hugh McDonell, Lieut. in the late Royal Regt. of New York: Petitioner has drawn five hundred acres and prays he may equally share His Majesty's bounty with the 84th Regt. The Board having examined into his petitions recommend him to His Excellency in Council for lots 20, 21, 23 and 24 in the first concession in the Township of Marlborough, and 24, 23 21 and half 20, second concession. Ordered to be referred to the Surveyor General.

Mathew Howard; Petitioner served in the late American War as a Subaltern, as appears by his vouchers, and having drawn only nine hundred and fifty acres conceives himself entitled to one thousand and fifty more, and is recommended by the Board for a grant of the same. Referred for further consideration.

Thos. and Terence Smyth: Petitioners are heirs to the late George Smyth, Esq., deceased, surgeon to the late Royal Rangers, agent for secret services, agent for private negotiation and commissary of provisions under General Haldimand; conceive their late father is entitled to three thousand acres of land. The Board having examined into their pretentions recommend them to His Excellency in Council for one thousand and four hundred acres of land in part of their late father's proportion, at the River Rideau beginning at the foot of the uppermost falls, next to the lake on the east side, extending three-quarters of a mile up towards the lake, and back to compleat the same. Ordered that it be referred to the Surveyor General to report on the pretentions of the petitioners and on the situation of the land prayed for.

Thos. Smyth: Petitioner served as Ensign in the late Royal Regt. of New York, and has drawn seven hundred acres of land, conceives himself agreeable to a late order of Government, entitled to one thousand three hundred acres more, and prays it may be granted him at the River Rideau, beginning at the foot of the uppermost rapid or falls next the lake on the west side, extending three-quarters of a mile up towards the lake, and back sufficient to compleat thirteen hundred acres, recommended for the same by the Board. Ordered that the recommendations be adopted and referred to the Surveyor General to report on the situation of the land whether or not vacant.

Denis Doyle: Prays for five hundred acres of land for official services as set forth in his petition (and vouchers Nos. 1, 2 and 3). The Board recommend to His Excellency the Lieut. Governor in Council. Recommendation adopted and ordered that five hundred acres be granted.

Joachim Deneault: Petitioner served as a volunteer in the late 84th Regt. and from his services and attachment to the British Government conceives himself entitled to five hundred acres of land and prays it may be granted him at the River Rideau, joining the lands below Mr. Wm. Larimier's two lots in front, and to extend back to make five hundred acres.

Recommendation for five hundred acres be adopted and referred to the Surveyor General to report on the lands petitioned for if vacant.

Wm. Fraser: Petitioner served as a Subaltern in the late Royal Regt. of New York and, having drawn only 500 acres, conceives himself entitled to 1500 acres more. Prays that five hundred acres of the same may be granted him joining Mr. Joachim Deneault upon the River Rideau, front two lots, and to extend back to make five hundred acres. Recommendation adopted with respect to quantity. Referred to Surveyor General to report whether the lands petitioned for be vacant.

Wm. Fraser[1]: Petitions in behalf of his late father, Simon Fraser deceased, representing that he served as Secretary to the Indian Department, conceives himself entitled to three thousand acres. Prays it may be granted him adjoining his own on the lower side and west of the River Rideau front, five lots, and to extend back to make three thousand acres of land. The Board not being informed of the proportion of land allowed, but having certain knowledge of Mr. Fraser's services, humbly recommend him to His Excellency in Council. Recommendation adopted to the extent of a Subaltern's proportion.

John Fraser[1]: Petition represents that he served during the American War as a private soldier in the 42nd Regt. and prays for four hundred acres of land. The Board having examined into his pretentions do grant him 200 acres and recommend him for one hundred more. Recommendation adopted for one hundred.

Bazil Rorison: Petition recites various services and, having served as a Subaltern Officer, prays for a Captain's portion of land. The Board recommend him for a Subaltern's proportion deducting nine hundred acres which appears he has drawn. Prays it may be located joining to Captain Kipp upon the lower and west side of the River Rideau and referred to His Excellency whether he shall be indulged with a Captain's proportion of land. Recommendation adopted as to a Subaltern's proportion and referred to the Surveyor General as to the location.

Ephraim Jones: Petition represents that he received during most part of the American War, a pension equal to that of a Subaltern Officer and has drawn only one thousand acres. Conceives himself entitled to one thousand acres more. Prays it may be granted him joining the reserves, the north side line of Marlborough the width of three lots in front, and to extend back to make one thousand acres. Recommended by the Board. Recommendation adopted and referred to the Surveyor General with respect to the location.

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[1] "Fraser" or "Frazer" in autographs.

Doctor Solomon Jones: Petition represents that he served during the late American War as Surgeon's Mate and has drawn for himself and family only nine hundred acres. Conceives himself entitled to eleven hundred more and prays it may be granted him beginning at the seventh lot below Marlborough, three lots in front and to extend back to make eleven hundred acres. Recommendation adopted and referred to Surveyor General with regard to ye location.

Doctor Solomon Jones: Petition in behalf of his late brother, David Jones, who served during the late war as Lieutenant in a Corps of Royal Rangers, that he has drawn five hundred acres of land. Conceives that he is entitled to one thousand five hundred acres more. Prays that the same may be granted him. Ordered that the same be inadmissible.

David McFall: Petitioner served in the American War as a Captain in the Queen's Royal Rangers, has drawn eight hundred acres of land and conceives himself entitled to two thousand two hundred acres more. Prays it may be granted him in the township back of Elizabeth-Town in the south easterly corner; eight hundred acres being two lots in the second and two lots in the third concession, then eight hundred acres in the north easterly corner, two lots in the eighth and two lots in the ninth concession. Then four hundred acres in the south westerly corner, being one lot in the first and one lot in the second concession. Then one lot in the north westerly corner; the whole being two thousand and two hundred acres. The Board recommend him to His Excellency in Council for the same. Recommendation adopted and referred to the Surveyor General with respect to location.

Daniel Jones: Petitioner represents that he has drawn only four hundred acres of land. Conceives himself entitled to a Subaltern's proportion and prays it may be granted him on the east side of the River Rideau. Ordered to stand over till a more specific report be made on petitioner's services.

6th July, 1794.

At the Council Chamber, Navy Hall.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; Alexander Grant, James Baby, Peter Russell and AEneas Shaw.

The Council, having taken into consideration the absolute necessity that a Table of Fees should be ascertained and fixed, have agreed on the Table following:—

	For 200 acres and under			Above 200 and not exceeding 400			Above 400 and not exceeding 800			Above 800 and not exceeding 1200		
	1st Class			2nd Class			3rd Class			4th Class		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
Seal	1	10	0	1	17	6	2	12	6	3	15	0
Secretary		10	0		12	6		17	6	1	5	0
Register		5	0		6	3		8	9		12	6
Auditor		2	6		3	1½		4	4½		6	3
Clerk Council		5	0		6	3		8	9		12	6
Surveyor General		5	0		6	3		8	9		12	6
Attorney General	1	0	0	1	5	0	1	15	0	2	10	0
Governor's Secretary		1	0		1	3		1	9		2	6
Surveyor Woods		1	6		1	10½		2	7½		3	9
	£4	0	0	£5	0	0	£7	0	0	£10	0	0

The 5th Class above 1200 acres (viz.)	The first 1000 acres	£10	14	2
	Every 1000 after	1	15	6

Incidental Office Fees besides the foregoing:

Departments	Every 100 words in official papers			Every search			Every plan			In the 3, 4, and 5 classes an addition for every 100 acres above 300		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
Register's		1	0	0	0	0		0	0	0	0	0
Surveyor General's	0	1	0	0	1	6	0	5	0	0	5	0

For grants above 1200 acres and not amounting to a township:—

Great Seal, for first 1000 acres £3:10:0, every additional 1000 after, 15s.

Secretary of the Province, first 1000, 30s, every 1000 after, 5s.

Register for recording the grant, first 1000, 12s. 6d, every 1000 after, 3s.

Auditor, half the Register's.

Clerk of the Council, first 1000, 12s. 6d, every 1000 after, 3s.

Surveyor General, first 1000, 30s, every 1000 after, 5s.

Attorney General, first 1000, £2:6:8, every 1000 after, 1s.

Governor's Secretary, first 1000, 2s. 6d, every 1000 after, 1s.

Surveyor Woods, first 1000, 3s. 9d, every 1000 after, 1s.

And whereas by His Majesty's instructions it is directed that the lands apportioned to the loyalists should be granted free of all expense; and it having been represented that in other colonies where lands have been granted, it has been customary for the several officers who are entitled to claim fees to receive half fees upon making out the grants to the loyalists, which half fees have been discharged and carried to the contingent expense of the Province: Resolved that all fees arising on grants of lands made out to officers and others under His Majesty's Royal Proclamation, shall be regulated according to the aforesaid Table and to be paid in moieties provides that the fees on any grant shall not exceed a moiety of the amount directed to be paid on grants of 1200 acres or five pounds, which five pounds shall be divided among the several officers in their respective proportions until His Majesty's pleasure shall be known with regard to the confirmation of the above Table, or otherwise.

JOHN SMALL.

Tuesday, 8th July, 1794.

At the Council Chamber.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; Alexander Grant, James Baby, Peter Russell and AEneas Shaw.

Ben. Pawling, late Captain in Col. Butler's Corps of Rangers: Petitioner having located one thousand acres in part of three thousand acres of land he is entitled to as a reduced captain, prays Your Excellency would be pleased to grant him the remaining two thousand acres in such part of the Province where they may be found vacant. Ordered that the same be granted.

John Beamer: Petitioner has been in the Province upwards of seven years, settled and improved on lot 19, first concession, Township of Flamborough, which he bought of Elias Long, prays that he may be confirmed in the same, and having a wife and five children, prays Your Excellency and the Council will give such further grant as shall seem meet. Ordered that a lot be granted to petitioner and that ye Surveyor General do locate the same.

Christian Warner, a Sergeant of Col. Butler's late Rangers, and John Stacey, late of the Naval Department: Memorialists have both been in the service of His Majesty, and about four years ago went to Long Point and located C.W. 400 acres and J.S. 200 acres; pray to be confirmed in the same as they understand part of the said lands are claimed by Nathan Barnum. Ordered that the same be rejected.

John Mordant and family: Petitioners have resided in this Province upwards of six years and being desirous of having the lands they have located and improved insured to them, humbly pray Your Excellency in consideration of the true loyalty and fidelity to the King of their family during last war (the circumstances of which Your Excellency is not unacquainted with) will please to grant to his mother 400 acres in the first concession, Township of Flamborough lots Nos. 16 and 17; Betsy and Nancy Mordant (daughters) a lot each, Nos. 12 and 13, second concession of the said township; to Ralph Mordant lot No. 15, first concession same township, and to James Mordant lot No. 54, first concession, Township of Ancaster; and John Mordant for lot No. 18, first concession. Ordered that the quantity be granted and referred to the Surveyor General to locate the same.

Francis Costa: Petition praying for land. Ordered that the petitioner shall have a grant of twelve hundred acres and that the Surveyor General do locate same.

John Purbus and Peter Van Every: Your petitioners both served His Majesty during the late war in the Ranging Service and have not received any land,—John Purbus prays for lot No. 2 in the first concession, Township of Flamborough, and Peter Van Every for lot No. 9 in the first concession and No. 9 in the second concession in the said Township of Flamborough. Ordered that the petitioners shall have a single lot each.

Irish John Wilson: Petitioner removed into this Province with his family six years since. That he has been indulged with a grant of 250 acres only for himself and family and, having a wife and eleven children, prays for a further grant. Ordered to be referred to the Land Board.

Andrew Van Every: Petitioner's father and brothers, five, served last war in Col. Butler's Rangers, that the care of his mother and the rest of the family devolved in great measure on himself. Prays for lot No. 1 in the first concession, and lot No. 1 in the second concession, Township of Flamborough. Ordered one lot if none has been granted to him.

Charles Field: Petitioner served His Majesty in the Marine Department three years on Lake Ontario, part of which time he was considered as an artificer, and has been since honourably discharged and, having married the daughter of a loyalist, prays that he may have a grant of land agreeably to His Majesty's bounty and that he may also locate in right of his wife. Ordered that one lot be granted.

Haz'n Spencer: Petitioner has not located all the lands he is entitled to. Prays for 600 acres, Township of Marysburg, Midland District, adjoining the lands of Owen Richards in the second concession east of the east lake in the said township. Ordered petition granted. Referred to Surveyor General to locate the same.

Hill Carney and Edward Carney: Petitioners during the American War were severely persecuted by the revolters. They were frequently imprisoned and fined in a sum equal to the amount of their property and are now removed into the Province with their families and pray for an allotment of land to improve upon. Ordered petition be granted. Place to be specified.

Wm. James and Ben. Richards: Memorialists pray to be confirmed in lands that they have long since taken possession without an order. Rejected.

Jonathan Miller: Petitioner is desirous of settling in the Province and prays Your Excellency will grant him four hundred acres of land adjoining the lands granted Mr. Ebenezer Allen and associates. Ordered that 200 acres be granted petitioner.

Timothy Skinner: Petitioner prays for a further location. Ordered that an additional lot be granted and referred to the Surveyor General to locate the same.

Wm. Gage: Petitioner about five years ago came into this Province with property to a considerable amount and was promised lands by Colonel Hunter but as the lines were not run out in such parts as petitioner wished, he bought an improvement in the Township of Saltfleet. Petitioner is now returned with his wife and family and prays for 1200 acres of land in said township. Ordered that petitioner shall have a grant of six hundred acres, Surveyor General to locate the same.

John Pettit: Petitioner served during last war in the New Jersey Volunteers six years and a half, and was honourably discharged from the said Corps at the conclusion of the war. Petitioner has received 250 acres but hopes that his loyalty, exertions and very great sufferings, will entitle him to a further claim on Your Excellency. Ordered that he shall have a grant of two hundred acres more.

Negroes (nineteen): Petitioners pray for a tract of land to settle on separate from the white settlers. Rejected.

Lewis Vail: Petitioner removed with his father out of New Jersey into the British lines on Staten Island, at the commencement of the war. Prays for an allotment of land contiguous as may be convenient to York and he will improve thereon. Ordered that the petition be granted.

John Aikman: Petitioner has received a grant for lot No. 39 in the first concession, Township of Ancaster, on condition that he should build on the same, but finds the lands so much broken that without a further indulgence he cannot get a livelihood for himself and family. Prays for lot No. 38 in the same concession and township. Inadmissible; only one lot upon the road can be granted.

Isaac Swayze: Petitioner most humbly prays for a location of land agreeably to His Majesty's most gracious bounty to his loyal subjects. Ordered that petitioner have a grant of twelve hundred acres and referred to the Surveyor General to locate the same.

John Mordant: Petitioner prays in consideration of the loss of his father in the late rebellion, their family are entitled to 1200 acres exclusive of their individual grants. Ordered petitioner have 200 acres in addition.

John Secord, late Sergeant in the New York Volunteers: Petitioner under the sanction of the Land Board took up lot No. 9, being 200 acres of land on the River Welland, erected a small house and improved the same, since which Isaac Vrooman has begun to clear land on the premises and claims the lot as his property. Prays to be confirmed in the same. Ordered to be referred to Surveyor General to report on the pretensions of the claimants.

Jesse Pawling: Petitioner having received one thousand acres of land in part of two thousand acres he supposes himself entitled to, prays for the remaining one thousand to be located to him. Ordered that the same be granted.

John Cain: Petitioner served His Majesty five years in Sir John Johnson's

Corps of Rangers and has been in the Province ever since. He has never had any lands assigned to him. Has a wife and two children and prays for lot No. 5, Township of Flamborough, first concession, and that he may have a further quantity of land for himself and family. Ordered to be referred to the Land Board.

William and John Shaver: Petitioners have been in the Province some time and William Shaver has been upon lot No. 54, second concession, Township of Ancaster, and prays for a grant of the same. Ordered referred to the Surveyor General, and one lot granted to John Shaver. Referred to the Surveyor General to locate them.

Peter Cain: Petitioner desirous of settling in the Province, prays for a location of one thousand acres. Ordered that he shall have a grant of 400 acres.

Robert Wilkins (Kingston): Petitioner prays for a grant of land on the back of the seminary land of New Johnstown of about 500 acres more or less. The Council admit the quantity and to be referred to the Land Board to report.

William Chewett, formerly an officer of the staff in the Province of Lower Canada, previous to the reduction in the year 1783: Petitioner prays Your Excellency will take his case into consideration and allow whatever proportion of land Your Excellency may think fit, he having received only 200 acres of land on the east side of the River Cataraqui. Ordered that petitioner shall have a grant of one thousand acres to make together 1200 acres.

Rebecca Field and Gilbert Field: Petitioner is the widow of George Field who served His Majesty last war in Col. Butler's Corps of Rangers, that her late husband never obtained more than one hundred acres of land, she humbly prays that she may have lands assigned to her in her husband's right, and also in her own. Her son Gilbert has also served in Col. Butler's Corps of Rangers and never taken up any lands. Requests that he may have a grant of lots Nos. 35 and 36 in the third concession, Township of Ancaster; and if Your Excellency think him deserving of a further indulgence, that lots Nos. 33 and 34 in the fourth concession of the said township may be granted him. Ordered that two lots be granted Gilbert Field, one additional lot to Rebecca Field, and referred to the Surveyor General.

John Davis: Petitioner encouraged by Your Excellency's most gracious Proclamation has removed together with eleven families into this Province from the State of North Carolina. Prays for a tract of land sufficient to accommodate him and the families he has brought with him. Ordered that it be granted, and place to be specified.

Neil McLean, Hector McLean, Richard Porter, Richard Cartwright Senior, William Atkinson: Memorialists set forth to Your Excellency that they have been resident in this Province since the settlement of it in 1784, and were members of the first Land Board that was ever instituted in this country, in which capacity they have uniformly continued to act, and are now doing business under the sanction and authority of Your Excellency in the same capacity. From the above mentioned, and many other circumstances, they pray that Your Excellency in Council will condescend to consider their claims in this particular instance and order them a grant of such portion or portions of the waste lands of the Crown wherever they may be unlocated. Ordered that a letter be written to know what lands the petitioners have received.

Abraham Beams: Petitioner has purchased an improvement of 250 acres of land and obtained a right to the soil, which is all the encouragement he has ever received from Government: Therefore prays for a location of land for himself and family as much as Your Excellency in Council shall seem meet.

Ordered that petitioner shall have a grant of four hundred acres, and referred to Surveyor General to locate the same.

James Durham, Edward Durham and Isaac Durham: Petitioners are the sons of the late James Durham, deceased. That their father suffered imprisonment and loss of property in the Colonies on account of his loyalty. Six years since he came into this Province and obtained a location of 200 acres of land but never located for his sons. Pray for a location of land and that lot No. 3 and No. 4 may be assigned them in the Township of Flamborough, first concession. Ordered that the petitioners shall have a grant of a lot each.

Wednesday, 9th July, 1794.

At the Council Chamber.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables William Osgoode, Chief Justice; Alexander Grant, Peter Russell and AEneas Shaw.

Ordered that His Excellency John Graves Simcoe, Esquire, Lieutenant Governor, have a grant of five thousand acres of land, being entitled to the same as Colonel of the late Queen's Rangers last war.

Resolved that the Town of York be built conformably to the plan now laid before the Council and marked with the letter (---), which plan has been considered and approved of by them; and that every person taking a town lot shall be under an obligation of building a house within the period of three years from the date of their certificate of location, and in case of non-compliance, shall forfeit the same.

James Lee: Petitioner served during the late war in the 23rd Regt. seven years, has drawn 200 acres; humbly conceives himself entitled as a soldier to some additional claim, and has also a wife and four children. Prays Your Excellency will authorize your petitioner to receive such additional land as Your Excellency's wisdom shall seem meet. Ordered not to be granted until His Excellency sees him himself.

Abnor Landon and others, of the Town of New Johnstown: Petitioners set forth that the inhabitants of said town are greatly hindered in their building for want of a saw mill and are under the necessity of carrying their grain a great distance for want of a grist mill. Pray to erect mill or mills upon the stream running through the town. Ordered to be referred to the Surveyor General to report how far the granting of this petition will interfere with the mill already erected.

Henry Weishuhn: Petitioner served as Sergt-Major in the 60th Royal American Regt. of Foot last rebellion and prays for a grant of land for himself, wife and five children. Ordered that it be referred to the Land Board.

Richard Loucks and Jacob Mercle, church wardens for the Presbyterian congregation in the Township of Osnabruck: Petitioners set forth that the congregation wishing to build themselves a place of divine service, and that they are in daily expectation of a minister to whom they have agreed to give a salary, pray that Your Excellency will grant the west half of the center common of the Township of Osnabruck, or such part of it as Your Excellency may think proper. Ordered to be referred to the Surveyor General.

John Backhouse: Petitioner is arrived with his family into this Province, that he is from Yorkshire in England, has a wife and eight children, and prays that an assignment of land may be made to himself and family. Ordered a grant of six hundred acres, and to be referred to the Surveyor General.

15th July, 1794.

At the Council Chamber.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables Peter Russell and AEneas Shaw.

Wm. Walker: Petitioner came from North Carolina with his family, eleven in number, four of which are able to bear arms. Prays for an allotment of land adequate to his family. Ordered that the petitioner and family have a grant of twelve hundred acres.

Jacob Ball, Sen: Petitioner sets forth that he served as a Captain of militia in the Province of New York from the year 1768 till the commencement of the rebellion and prays Your Excellency in Council will grant him (with what he has received) the same quantity allowed to Captains who served during the rebellion. The petition not admissible.

Peter Secord: Petitioner joined His Majesty's standard in the year 1777, and employed in the service and received pay, from which he was discharged on account of his age. Prays for lots Nos. 93, 94, and 95 in township No. 1, having resided on said lands ever since the year 1781. Ordered that the same be granted.[1]

Daniel Servos: Petitioner located and settled on lands on this side the Four Mile Creek in the year 1785, which lands fall within the reserve. Prays that he may be granted one lot fronting the house in which he now lives. Referred to the Surveyor General to show where the lands said to be reserved are laid out.

Adam McColgan: Petitioner served during the whole of the late rebellion in Your Excellency's Regt. and received only one hundred acres for his services. Prays that if the request does not appear unreasonable, Your Excellency will grant him a lot of land in the Township of York. Ordered that the same be granted.

Staats Springsteen: Petitioner served the last war in Col. Butler's Rangers and resided in this Province ever since they were disbanded, and last summer went to Murphy's Creek in the vicinity of Long Point and improved on land at that place. Prays that the same may be confirmed to him. Ordered that the same be rejected.

John Furga: Petitioner served last war in Col. Butler's Rangers. Prays that he may have leave to remain on his place at Long Point. Ordered to be referred to the Surveyor General.

John Wrong: Petitioner prays for lot No. 36, 3rd concession on the 20 Mile Creek. Ordered to stand over.

George Keefer: Petitioner removed into this Province last fall and has been indulged with a location of land of 200 acres by the Land Board; that his father had great losses, &c., and served with the British troops last war until his death. Petitioner prays for a location of land in right of his father. Ordered that the same be referred for further consideration.

James Chambers: Petitioner is desirous of settling in this Province and prays for an allotment of land. Ordered that he shall have a grant of 200 acres.

Parker Mills: Petitions for land at York. Ordered to be considered with the York petitions.

Jacob Baum: Petitioner came into this Province in the year 1788 and improved in township No. 5 near Lake Ontario. Erected mills on the Thirty Mile Creek in the gore between townships Nos. 5 and 6. At certain seasons there is not water sufficient to drive the said mill, therefore your petitioner prays for three hundred and fifty acres contiguous to the said mills in the gore, this quantity being the amount of his family lands granted by the Land Board. Ordered that the same be granted.

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[1] Rescinded 11th July, 1795 and 400 acres granted in lieu.

James O'Hara: Petitioner served and joined His Majesty's troops at New York. Prays for an allotment of land to accommodate himself and family. Ordered that he shall have a grant of 200 acres.

William Spurgin: Petitioner left his property and joined Lord Cornwallis last war. He came to this Province near twelve months since with his family. Prays Your Excellency will grant him an allotment of land to improve upon. Ordered that he shall have a grant of 200 acres for the present. Referred to the Surveyor General.

Joshua Booth, in behalf of Robert Clerk, Esquire: Petition praying for a mill seat &c. Resolved to be inadmissible as the mill seat belongs to the Crown.

Colin McNabb: Petitioner has not received any land which he presumes he is entitled to as a reduced officer, therefore humbly prays Your Excellency will be pleased to grant him his proportion. Your petitioner respectfully represents that he has a wife and five children, and prays that an additional grant be allowed him in behalf of his family. Ordered that the petition be granted.

Margaret McCool: Petitioner is just arrived with her family consisting of three sons and two daughters. Her husband and eldest son bore arms in support of His Majesty's Government, and both lost their lives at Charlestown. Prays Your Excellency will grant her and family such lands as Your Excellency's wisdom shall seem meet. Ordered that she shall have a grant of eight hundred acres (including those already allotted) for herself and family.

Miles Hitchcock: Petitioner has a wife and three children living with him, and has been upwards of eight years in the Province. Prays for lots Nos. 14 and 15 on the 20 Mile Creek. Ordered that the same be referred to the Surveyor General.

Petition of the settlers of the Township of Osnaburg: Petitioners humbly beg that Your Excellency will be pleased to grant a surveyor to run over the third concession in the right place, as there is a sufficient quantity of land for two concessions, and to prevent further mistakes. Ordered to be referred to the Surveyor General.

Abraham Neafe: Petitioner has received lot No. 30, second concession in the Township of Sugar Loaf East, and previous to the survey of the said township had erected a valuable improvement on said lot and also on lot No. 29 in the same concession. Prays for a grant of the same to cover an improvement which he has made at great expense and labour. Ordered that the same be granted if vacant.

Petition of the inhabitants of the north branch in the seventh and eighth concession of the lands given to the petitioners in the County of Stormont:

Represents that the Indians are giving out the said land to settlers and have made some encroachment on your petitioners. Pray that the lines run by McNiff may be established, or that Your Excellency will order a surveyor to survey the eighth concession and establish John Chisholm on lot No. 1, seventh concession, and Alexander Munro on lot No. 2 in the eighth concession, and the widow McLeod do on lot No. 4, agreeable to the plan, and the said lots to extend from concession line to concession line in order that every man shall occupy his own lot. Ordered that the above petition be referred to the Surveyor General.

Jonathan Walton: Memorialist having served the last American war as Lieut. of the provincial armed boats, as will appear by certificate, finding that persons of his description have drawn lands, is induced to hope that Your Excellency, from your knowledge of your memorialist's services, will grant him the quota of land common to a Subaltern. Ordered that Mr. Walton have a grant of eight hundred acres in addition to the 1200 he possesses in the Township of Hope.

Petition of the Grand Jury for the January Sessions, Eastern District: That your petitioners having long experienced the inconvenience of the want of a public market in the Town of Cornwall, pray that Your Excellency will grant the same and that it may be held every Saturday. Ordered that it be granted.

John Morehouse: Petitioner is desirous of becoming an inhabitant of this Province and can bring on a number of settlers, worthy inhabitants; therefore prays Your Excellency will grant him a quantity of land to accommodate himself and associates. Ordered that he shall have a grant and to look out for lands.

Thos. Kinnear: Petitioner has served as seaman on Lake Erie under Commodore Grant. Prays that he may be allowed the usual proportion of land. Ordered that he shall have a grant of two hundred acres.

John Lyon: Petitioner prays for an allotment of land to improve upon. Ordered that the petitioner shall have 200 acres.

Benjamin Canby and John McGill: Petitioners have been at a great expense in erecting mills on the military communication between Chippawa and the falls about one mile above the mills of John Burch, Esq. Pray for a location of land of half a quarter of a mile below the place designed for said mills, and a quarter and half-quarter of a mile of said military tract above the place first mentioned. Your petitioners further pray to locate twelve hundred acres of timber land on the Chippawa Creek. Ordered to specify the vacant lots which the Surveyor General will report upon, the other part to be granted if there be a vacancy.

Thos. Dickson: Petitioner prays for a town lot at Fort Erie, as contiguous to the present fort and stores as may be allowed under such regulations. Ordered that it be granted and referred to the Engineer.

Thos. Bradford: That he is just arrived with his family, twelve in number, prays your Excellency will grant him lands adequate to his family to improve upon. Ordered that petitioner and his family have a grant of six hundred acres.

Jane Davis, widow; John Davis, Robert Davis, James Davis and James Darickson: Petitioners are arrived from North Carolina in order to live near her son, Thomas Davis, who has been settled in the seventh township of the County of Lincoln for four years past. Prays for lands near to her son's. Ordered that they shall have two hundred acres each.

David Bradford: Petitioner is arrived from North Carolina with his wife and six children with intent to settle in this Province. Prays for lands in the Township of Ancaster. Ordered that he shall have a grant of six hundred acres.

Examined the Proceedings of the Land Board for the Counties of Addington, Lenox and Prince Edward, held at Adolphustown the 14th of May, 1793, to the 20th of May, 1794.

P. M. Fortier, Lieut. in His Majesty's service on the lakes: Prays for two thousand acres of land and that he may be permitted to locate as much thereof in the marsh lying between the Townships of Ancaster and Flamborough, commencing at the western extremity to the said marsh on each side of the creek running through the same. Ordered that the petitioner having received eight hundred acres, the quantity he is entitled to will be made up to Mr. Fortier.

Mrs. Elizabeth Thompson: Petitioner states her great services last war, and prays for such lands in the Township of York, or other unlocated part of the Province, as His Excellency's wisdom shall seem meet. Ordered a grant of 600 acres.

JOHN SMALL.

6th September, 1794.

At the Council Chamber, Navy Hall.

Present: The Honourables Peter Russell and AEneas Shaw.

The Council were pleased to examine the Public Accounts of the Province of Upper Canada between the 1st of January and the 30th of June, 1794, as under:

No. I. His Excellency the Lieutenant Governor's office, an account of ordinary and incidental expenses incurred to the 30th June inclusive, amounting to £132.1.4½.

Balance remains in the office to be accounted for, £298.13.1¼.

No. II. The Receiver General's General Account Current for the half year ending 30th June, 1794, £2,410.13.7¾.

Balance remaining in the Receiver General's hands and carried to credit of Government in next account, £422.6.4¼.

No. III. The Surveyor General's Account Current from the 10th October, 1793, to 10th April, 1794, Halifax Currency, including a balance due to him on the 10th of April last of £976.12.8 Halifax Currency, £2,212.15.6½.

No. IV. William Jarvis Esquire, for fees due to His Excellency the Lieutenant Governor from 1st January to 30th June, 1794, £70.10.0.

No. V. William Jarvis, Esquire, Secretary and Register, for fees due to him from 1st January to 30th June, 1794, £25.9.0.

No. VI. William Jarvis, 1st January to 30th June, 1794, £48.15.4.

No. VII. The Attorney General, travelling expenses on the Eastern and Midland Circuits, £45.0.0.

No. VIII. The Attorney General's travelling expenses on the Western and Home Circuits, August 11th, 1794, £45.0.0.

No. IX. The Attorney General, an account of fees due to him between 1st January and 30th June, 1794, £25.4.0.

No. X. John Small, Esquire, Clerk of the Council, General Account in the office, £143.15.0.

No. XI. D. Burns Esquire, Clerk of the Crown and Common Pleas, account of fees and office rent, etc., to 30th June, £38.19.6.

The Council finds the expenditure of the above accounts properly authorized and vouched, certify the same to be regular, orderly and to the best of their belief, just and true.

4th November, 1794.

At the Council Chamber, Navy Hall.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables Peter Russell and AEneas Shaw.

The Attorney General attended with a proclamation for the prevention of the carrying over land of rum and other spirituous liquors to be sold amongst the Indians, which was approved and ordered to pass the Seal of the Province.

Richard Barnes Pickell took the oaths and was sworn Confidential Clerk to the Executive Council.[1]

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[1] The minutes sent home to this date.

Benjamin Springer: Petitioner sets forth that he has ever been attached to the British Government and requests that he may have such a proportion of land for his family, consisting of a wife and three children, as Your Excellency shall think meet. Ordered that petitioner shall have 200 acres.

Nathaniel Pettit Esq.: Petitioner by reason of his steady attachment to His Most Gracious Majesty and the British constitution, has suffered great losses, humbly prays a further allotment such as Your Excellency may judge him worthy of. Ordered to be referred to the Acting Surveyor General and that he shall have a grant altogether of two thousand acres.

John Hill Junior: Petitioner served upwards of three years as a volunteer in Captain Oliver Templeton's Company last war, prays for a grant of land. Ordered to stand over till he appears.

Mary Ridout (late Mary Campbell) a loyalist (U.E.): Petitioner prays for lot No. 12, with the broken front, in the front concession, Township of York, or other vacant lot in said township. Prior claimant for the lot.

Arent Bradt: Petitioner during the whole of last war was a Captain in the militia commanded by Sir John Johnson, that your petitioner expected a lot of one hundred acres adjoining where he now lives but understands that by the late regulation of the Council the greatest part of those lands is otherwise disposed of; therefore humbly prays Your Excellency will grant him such a quantity of land as in your wisdom shall think proper. Ordered that his improvements be granted eastward of a line run from the Mile Tree to the Town Tree, at No. 412, near 100 acres.

Edward McLaughlin: Petitioner sets forth that he served His Majesty King George several campaigns during the last war in America under the command of General Amherst and General Wolfe, in reducing the French garrisons in Canada; and prays for land on the west side of the road leading from York to Lake Simcoe, being informed there is from Nos. 40 to 48 not located. Petitioner has a family of five persons grown to the years of maturity and prays for such proportion of land as they may severally be entitled to. Ordered that the petition be granted and referred to the Acting Surveyor General for location.

James Robins: Memorialist wishing to be possessed of a convenient situation in order to build a wharf and store house at Kingston, therefore begs leave to solicit Your Excellency for a grant of a lot fronting No. 2, being nearest the property he now possesses. Ordered to be referred to the Surveyor General.

Jacob Servos: Petitioner prays for a grant of a township. Ordered that a proportion of land will be granted to all good settlers the petitioner shall bring into the Province.

George Neill: Petitioner embodied a number of loyal militia in South Carolina in behalf of His Majesty's Crown and dignity and received a Major's commission. Prays for an allotment of land such as Your Excellency shall seem meet. Ordered to stand over for consideration and personal appearance.

Alexander Markle: Petitioner has been a resident in the Province since the close of last war. The want of years prevented him from bearing arms with his four brothers who all served in Col. Butler's last Rangers. Petitioner married the daughter of a loyalist by whom he has five children, that your petitioner has received one hundred acres, and prays for a further tract for himself and family. Ordered that the petition be granted and to point out his tract.

Joseph Jessup: Petitioner served in the late American war, a Captain, conceives himself entitled to 3000 acres of land and made application to the Land Board some time before the division of the Province and had by their order a location marked on the plan of the Township of Young for lots Nos. 1, 2, 3, 4, in the seventh concession, and lots Nos. 1, 2, 3, 4, in the eighth concession, and lots Nos. 1, 2, and half of lot No. 3, in the ninth concession, the whole making two thousand one hundred acres of land. Prays to be confirmed in said location. Ordered to be referred to the Surveyor General.

John Devine: Petitioner prays for a location of land about the head of the Bay of Quinté, or between the Town of York and Lake Simcoe. Ordered that the petition be granted if not located at York.

George Brayton and Wait Rathbun, for themselves and associates: Petitioners can bring fifty settlers in the course of two years and a considerable part of this number the ensuing spring and summer will enter upon their lands; that a settlement on the River La Tranche, alias Thames, would be their choice; therefore humbly pray that a tract of twenty-five thousand acres, adjoining William Reynolds', or in some other unappropriated lands, may be granted them and their petitioners. Ordered that the prayer of the petition be granted and to look out for land at the Surveyor General's office.

Mathew Gilmar: Petitioner is a married man, has six children, and prays for a grant of land between Patterson's Creek and Grand River. Ordered two hundred acres for the present.

Richard Ruth: Petitioner entered into His Majesty's service in the year 1758, has never received any land, and humbly prays Your Excellency will grant him three hundred acres of land or such other quantity in the 10th township on the Chippawa Creek. Ordered to be referred to the Surveyor General for a 200 acre lot.

Jacob Servos: Petitioner has improved on land near the Four Mile Creek supposed to contain 200 acres, prays Your Excellency will grant him an addition of 1800 acres having served as Lieutenant in the Six Nation Indian Department. Ordered to look out for a location and that the same be granted.

John Hill: Petition praying for one thousand acres of land in the 10th township. Ordered to lie over till he appears.

John Jones: Petition sets forth that he served His Majesty as a Sergeant in the 60th Regt. Prays for a grant of 500 acres for himself and the customary allowance for his wife, her mother, and one child. Ordered to lie over for consideration.

James Macklin: Petitioner wishes to settle himself at the mouth of the Chippawa Creek, and on that central spot to erect pot-ash works. Prays for a portion of the public ground for the above useful purposes, for which he will make such annual compensation as Your Excellency shall think proper. Ordered to be referred to the Engineer, Lieut. Pilkington, for the proper place of location.

Wheeler Douglass, for himself and associates: Petitioners pray for twenty thousand acres of land in a body on the River La Tranche, or some other vacancy. No lands vacant on the Thames. To specify other situation for location.

Samuel Gardner: Petitioner desirous of settling himself and family in this Province, and being encouraged thereto as a subject of His Majesty's and a native of Ireland, prays for such quantity of land as Your Excellency shall think proper to allow. Ordered to stand over for want of specification.

John Dun: Petition praying for 1200 acres of land. Ordered that the same be granted.

John Young, in behalf of a number of inhabitants of the Presbyterian persuasion, Town of Newark. Petitioners are desirous of erecting a church and school house &c., and pray that a square of four lots may be granted them for that purpose. Ordered that the same be granted.

John Smith Cooper: Petitioner has improved lots Nos. 24 and 25 in the second concession, Township of Flamborough. He has a wife and five children and prays for a grant of the same. Ordered to be referred for a lot to the Surveyor General.

David McCrea: Memorialist served last war from the year 1779 to the peace in this country without fee or reward, and now intends to settle in this Province with a large family. Prays Your Excellency will grant him such a proportion of land as may appear reasonable. Ordered to be referred for consideration.

Abel Stevens: Petitioner has settled on lands on the Gannonaque River, County of Leeds, and has made considerable progress in cultivating the same. Prays for a grant of the rapids between the second and third lakes, and likewise for the falls between the third and fourth lakes on said river to erect mills upon to accommodate the new settlement, with a proportionable tract of land at the two scites. Ordered to be referred to Surveyor General.

Abel Stevens, in behalf of himself and associates: Prays for a gore of land between the ninth township and their improvements. Ordered also to be referred to Surveyor General.

Wm. Patterson, and others: Petitioners having settled on Gannonaque River, County of Leeds, in further exploring that country discovered a bed of iron ore, and being desirous of erecting a bloomery, pray for a grant of one thousand acres of land at the falls on a creek which empties itself into the largest lake below the new settlement, and leave to open the said vein of ore for the purpose of manufacturing iron. Ordered to be reserved for consideration, and that a copy of the petition be sent to His Excellency.

John Ellis, late soldier in His Majesty's 84th Regt: Petitioner prays for land for himself, his wife and three children. Ordered if he has not already received any that he shall have the usual allowance.

Thos. Serjant: Petitioner has a wife and four children and prays for such a proportion of land as Your Excellency shall think proper. Ordered that he shall have two hundred acres.

Abraham Devaynes, Isaac Devaynes and Levi Devaynes: Petitioners having observed a firm and loyal attachment to His Majesty's Crown and interest during the late war with America, pray for such a proportion of land as Your Excellency may think proper, and humbly beg leave to remind Your Excellency of a promise of a tract of land running from the stake No. 5 up to Toronto Creek. Ordered that the petition be granted.

Eliphalet Hale: Petitioner has a wife and six children and prays for a grant of land to accommodate them. Ordered that he shall have a grant of two hundred acres.

Jonathan A. Pell: Petitioner was a Captain in the militia and will remove with his family into this Province. Prays for a grant of three thousand acres of land in either of the towns joining Chippawa, Fort Erie or Sugar Loaf, and also family lands for his wife, one daughter and five sons. Ordered to stand over till he come in.

Hugh Earl, Lieutenant on board the Onondoga: Petition praying for land. Inadmissible.

Ebenezar Guernseys: Petitioner desirous of settling in this Province, prays for 1200 acres of land. Inadmissible.

Thos. Hind: Petitioner is come into this Province to settle with his family and prays for such a quantity of land as have in like cases been granted to others. Ordered that he shall have 200 acres.

Frederick Mickell: Petitioner is desirous of becoming a settler. Prays for such a quantity of land as Your Excellency may think proper, and also for several families that may come in with him this fall. Ordered two hundred acres for each family.

George Forsyth: Petition praying for land. Ordered to stand over for consideration.

Elizabeth Van Every: Petitioner's former husband was Frederick Doxsteeder, a Lieut. in Col. Butler's Rangers last war. Petitioner has never taken up any lands for herself or husband. Prays Your Excellency for such portion of lands as your goodness may think proper. Ordered to be brought on next Council.

JOHN SMALL.

5th November, 1794.

At the Council Chamber, Navy Hall.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables Peter Russell and AEneas Shaw.

His Excellency and the Council took into consideration that the different Land Boards shall cease and determine from the sixth of November.

6th November, 1794.

At the Council Chamber, Navy Hall.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables Peter Russell and AEneas Shaw.

His Excellency and the Council met pursuant to their adjournment and proceeded on the further consideration of the business before them yesterday, and entered into the following resolves:—

Whereas, the existing state of the Province renders the continuation of the Boards established expressly for the purposes of facilitating the settling of such lands as His Majesty, in his royal beneficence, has been pleased to grant to the loyalist and reduced troops inexpedient and unnecessary, it is hereby resolved that the authority heretofore granted to such Boards shall from and after the sixth day of November, one thousand seven hundred and ninety-four, cease and determine,

And Whereas it is expedient, agreeably to the proclamation of His Excellency the Lieutenant Governor bearing date February 7th, 1792, that adequate provision should be made for the compliance therewith in the most effectual manner, it is hereby resolved that all petitions whatsoever for grants of the waste lands of the Crown be made to the Governor, Lieutenant Governor or person administering the Government in Council through the Clerk of the Council, except for the immediate location and encouragement of all such as it may be proper to admit as settlers within His Majesty's Province, and more especially for the due care and observance that none such be admitted but those whose loyalty, industry and morals shall appear to entitle them to the benefits of His Majesty's bounty and render them useful inhabitants of this Province, it is hereby resolved that all persons professing the christian religion and being capable of manual labour who can adduce satisfactory vouchers of their having paid obedience to the laws and led a life of inoffensive manners in the country where they last resided, shall in future be considered as qualified to be admitted to the possession of lands within this Province after having taken and subscribed the Oaths of Allegiance and Settlement prescribed by Act of Parliament.

Therefore any magistrate living and residing in the county wherein any person of such a description may wish to become a resident, is duly authorized to give him a recommendation to the deputy surveyor of the country or district for a location of lands in the following words: The bearer A.B., of years of age, born in professing the christian religion and by trade a having been this day examined by me and taken the oaths prescribed by law, is recommended for a location of two hundred acres of land within this county provided it does not appear from the surveyor's books that he has had any prior grant of lands in any district of this Province. Given under my hand, &c. To the Deputy Surveyor of the District of . And it is hereby resolved that the Deputy Surveyor on the receipt of this certificate shall proceed to make an assignment agreeably to the usual form and manner.

And as it is expedient that the fees upon such grants be made public, resolved that they be stated in this proclamation as under:

The fee to the Magistrate who administers the oath and grants the certificate	£.1.0
To the Deputy Surveyor for the search	0.1.6
Fee for the assignment	0.1.0
Clerk of the Council	0.6.0
Title deed when the grant is delivered	4.0.0
Total Halifax Currency	£4.9.6

His Excellency and the Executive Council were pleased to order that the above resolves should be printed and sent to the different Land Boards with the following letter:

Gentlemen: I herewith enclose to you a resolution of His Excellency, the Lieutenant Governor in Council, by which you will see that your duties as a Board cease and determine from the sixth of November.

I am directed by Lieutenant Governor Simcoe to observe to you that the recommendatory power which is now vested in your hands as individuals will, it is presumed, be extensively beneficial to His Majesty's subjects and conduce to the promotion of that regular mode of population among the lower classes of persons, which by introducing virtuous and industrious members of community to the King's bounty, and excluding those of a contrary description may, it is reasonable to presume, lay that foundation for the happiness and safety of the community which might be endangered by a more general and promiscuous admission, it being certain the industry and regular habits of obedience to just Government conduce more than a numerous and an irregular population to the wealth, the strength and prosperity of any community. There can be no doubt, Gentlemen, but the many solemn and beneficial duties which the law calls upon you to perform as magistrates, and the knowledge which you possess of the people in your vicinity enables you to execute, will receive additional vigour from the very important delegation which is now entrusted to your wisdom and discretion.

I have the honour to be, Gentlemen,
Council Office, Navy Hall, Your most obedient, very humble servant,

8th November, 1794.[1] J. Small.

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[1] The Minutes sent home to this date.

18th June, 1795.

At the Council Chamber, Newark.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables Peter Russell and AEneas Shaw.

The plan of the Town of York being taken into consideration, resolved that the front lots of the town be extended to eighty-eight feet in the front instead of sixty-six as originally proposed, and that all the lots of the back street be extended to sixty-six feet.

H. Hovel Farmer, Esq.: Petition presented by the Hon. Peter Russell, praying for a front lot in York and a farm lot of 200 acres in the neighbourhood. Ordered that the same be granted.

The following petitions for town lots in the Town of Newark were laid before the Council, and granted provided there are no prior claimants, and referred to the Acting Surveyor General for location:

Mary Mansfield	for lot No.	49
William Sloan	do	188
Samuel Casady	do	41
Samuel Sheppard	do	154
William Orr	do	200
Paul Averell	do	163
Eliphalet Hale	do	140
Martin McClellon	do	51
Widow Sparbanks	do	276
George Adams	do	47
Andrew Thompson	do	139
Richard Simpson	do	137
John Gordon	do	16
Thomas Adams	do	48
George Law, Junior	do	231
N. Klengenbrumer	do	240
Alexander Allen	do	275
Eliza Johnson	do	230
George Campbell	do	50
Robert Thompson	do	46
Robert Kemp	do	18
John McNabb	do	155
John McKay	do	209
Richard Hatt	do	220
John Wray	do	219
Peter De Jordain	do	210
Joseph Tyler	do	164
Rufus Walbridge	do	117

JOHN SMALL.

19th June, 1795.

At the Council Chamber, Newark.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables Peter Russell and AEneas Shaw.

His Excellency the Lieutenant Governor having laid before the Council a letter of the magistrates of the Eastern District relative to their having contracted for, and began, a court house and jail on the lands adjacent to Johnstown reserved for the Crown considering the same as the most eligible spot for that purpose, it is resolved that a grant be made to the town agreeable to the request of the magistrates and that Mr. Chewett be directed to make out the allotment necessary for that purpose.

Read the following petitions of:

R. McDonell: Praying for a vacant lot in the first township called Chatham. Ordered that the same be granted.

Abner Lander: For a mill seat which had been referred to the Acting Surveyor General. On the Surveyor General's report ordered that a letter be written to petitioner that he may have the mill seat on lease.

John Powell: For lands as a reduced Captain in the Indian Department. Ordered that three thousand acres of land be granted to the petitioner and the Acting Surveyor General to report on that part of the petition which claims lands for his family.

William Lees: For a lot at Malden. Read the Acting Surveyor General's report thereon. Ordered to apply further, or to Col. McKee as patentee.

James Robins: On the report of the Acting Surveyor General, ordered that a water lot be granted to petitioner and referred to the Acting Surveyor General for location.

Upon the application of the Acting Surveyor General to procure the authority of His Excellency, the Lieutenant Governor, to continue the five extraordinary surveyors when necessary, ordered accordingly, and that Mr. Iredale be put upon the establishment and employed instead of Mr. McNiff, and sent to Detroit to execute the surveys necessary in the Western District.

On an application of the Acting Surveyor General for his deputies to complete certain Orders of Council of the late Province of Quebec, in favour of certain reduced officers, ordered that the Acting Surveyor General be authorized to assign the land according to the tenor of the report.

Read His Excellency's instructions to Mr. Aitkins of the 24th January, 1795, relative to grants of lots in the Town of Kingston. Ordered to be confirmed.

Ordered on application of the Acting Surveyor General that any certificate of the late Land Board of Lincoln may be valid to the obtaining of an assignment in the Township of Beverly adjoining the said county.

Read the petition of Col. McKee applying for a survey to be made of Malden. Ordered accordingly.

Read the petition of Abel Stevens to obtain an order for a mill seat claimed by Mr. Justus Sherwood. Ordered that the Acting Surveyor General be directed to write to Mr. Sherwood to show cause why Abel Stevens should not be confirmed in the lands he prayed for.

On the report of the Acting Surveyor General of Abel Stevens and Justus Sherwood, each of them claiming lands including a mill seat, ordered that the Acting Surveyor General shall endeavour to accommodate each with a separate fall on the Gananoqui water.

On the disputed claims of Doan, Wilson, Vrooman and Seacord, ordered that the Surveyor General do write to them to know by what authority they have taken possession of the lands in dispute.

A letter of John Cox was laid before His Excellency the Lieutenant Governor and Council claiming lot No. 20 at York. Ordered that he be informed Mr. Playter has an Order of Council for the said lot.

His Excellency the Lieutenant Governor and Council were pleased to approve of the surveyors of the Eastern District having appropriated a space formerly reserved for commons for completing one-seventh of the lands for the clergy.

JOHN SMALL.

20th June, 1795.

At the Council Chamber, Newark.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables Peter Russell and AEneas Shaw.

Petition of Mr. Jonathan Learned, in behalf of himself, Jeremiah Learned, Elijah Dix, William Dix and their associates, praying for a township being read, ordered that a tract of land in the rear of the Mohawk Settlement in the County of Hastings, parallel with the Townships of Huntingdon and Rawdon be reserved by the Acting Surveyor General for their associates, and that Jonathan Learned, Jeremiah Learned, Elijah Dix and William Dix shall have therein a grant of twelve hundred acres each.

Mathew Gilmore: Petition setting forth that he is arrived with some families from Pennsylvania, and praying for lands according to the tenor of their petitions, and for a further allotment of lands over and above the two hundred granted him last year. Ordered that George Nicholson, John Nicholson, Patrick Long, Patrick McKee, shall have two hundred acres each for the present and that John McKee shall have two hundred acres for the present between the Grand River and Patterson's Creek, and referred to the Acting Surveyor General for location.

Messrs. Baker and Jones: Praying to have their respective townships surveyed. Ordered and directions given to the Acting Surveyor General accordingly.

Jacob Lamb: Praying for a lot of land in the Township of Ancaster. Ordered that the same be granted.

John Small, Clerk of the Executive Council: Praying for a front town lot and a farm lot at York. Ordered accordingly.

The Surveyor General laid before the Council his suggestions respecting patentees of townships. Ordered to lie over for consideration.

The Acting Surveyor General laid before His Excellency the Lieutenant Governor and Council two plans for the Town of Chatham, and the lots in its vicinity, with sundry petitions for lots in that township, which were read accordingly, the plans approved and the petitioners' names inserted on the lots which were granted to them respectively and assignments directed to be prepared for them by the surveyor General.

First township, north side first concession: Prideaux Selby, Mathew Elliot, Thomas McKee, Coleman Roe.

Second township, north side first concession: William Baker, Thomas Reynolds.

First township, south side first concession: Peter Curry, Col. McKee, Thomas Duggan and D. W. Smith.

Second township, south side first concession: Thomas Clarke, William Thorne and John Goudie.

First township, north side second concession: William Mickle, Dr. Harffy and Simon Girty.

Lieutenant-Colonel England: Petition respectfully shows that the petitioner has been President of the Land Board for the Counties of Essex and Kent for two years and a half, during which time he applied himself diligently to the execution of the trust committed to his charge as the great increase of the new settlements within that period now shows; that the petitioner wishes to obtain some lands in this Province; the petitioner therefore prays Your Excellency, that in the event of his being considered to merit them that His Excellency will be pleased to order a location for him of two thousand acres in front either in the fifth, sixth or seventh township on the River Thames, and in case it should be found inconvenient to grant your petitioner the whole of the lands he requests on the River Thames, he prays to be granted some part of them there and the rest wherever His Excellency may consider proper.

His Excellency the Lieutenant Governor and Council being apprized of the advantages derived to the district in various instances from the public spirit and exertions of the petitioner, think themselves fully justified in supporting his claim upon the most equitable principles, and therefore resolve that the prayer of the petition be granted.

John Ashton: Upon the report of the Acting Surveyor General ordered that the concession lines of two townships on the Rideau marked under the name of Alexander Wright and associates, be surveyed to accommodate such settlers as may be brought in by John Ashton and Samuel Stafford, &c.

The petitioner Ashton will be confirmed in the possession of 1200 acres of land and each settler whom he brings in will have 200 acres in a township on the River Rideau marked by the Surveyor General for Alexander Wright and associates.

Samuel Stafford will likewise be confirmed in his 1200 acres and each settler in 200 acres in the other township marked under the name of Alexander Wright. These persons upon coming into the Province must take the oaths prescribed and upon their application to the Surveyor General will receive an assignment of their respective lands.

JOHN SMALL.

22nd June, 1795.

At the Council Chamber, Newark.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables Peter Russell and AEneas Shaw.

Messrs. Meldrum and Park: Petition for a mill seat near Chatham. Inadmissible, the land having been previously granted to Mr. Clarke who had built a mill on the premises. Directions were at the same time given to the Acting Surveyor General to make out an assignment of it to Mr. Clark that a deed may be prepared and lodged in the Secretary's office for him to take up.

Henry Woods: Petition stating that upon application to the Land Board of Lincoln he was directed to look for land, which he did, and fixed himself on lots Nos. 12 and 13 in the second concession, Township of Willoughby, where he lives and has made considerable improvements, therefore prays to be confirmed in the possession of the said lots, also the lots Nos. 14 and 15 in the second concession and Nos. 12 and 13 in second concession of the said township for his family, should they be vacant, 200 acres. Ordered to be referred to the Acting Surveyor General.

John Secord, Sergt: Petition stating that having served His Majesty during the late war in America, as will appear by his discharge from Lieut.-Col. Turnbull, he prays that No. 35 in the second concession of the Township of Beverly and the remaining four hundred acres in the gore between the Townships of Flamborough and Beverly, be granted him with such other quantity for petitioner's family as His Excellency shall think fit. Ordered that the same be referred to the Acting Surveyor General.

James McLaughlin: Petition stating that he is a native of Ireland and came into the Province about six years ago well recommended, in consequence of which Col. Gordon and Mr. Hamilton gave him permission and authority to look out for any unoccupied lands and to possess the same, which he accordingly did in the rear concession of the fourth township; that he has frequently sent to the Surveyor's office to procure assignment but was told that a Mr. Steadman or a Mr. Frey had their names entered for those lots. Petitioner therefore prays to be reinstated in the premises. Ordered that the Acting Surveyor General be directed to assign to the petitioner the two hundred acres now in his occupation as Frey, whose name is inserted upon those lots, never improved the same and is now a subject of the United States.

John Hambro: Petition stating that he served as Carpenter's Mate on board several of His Majesty's ships from the 20th of December, 1770, to the 5th of April, 1781, as appears by his certificates, all which certificates were shown to the Acting Surveyor General at Newark in June, 1795; that petitioner having been disappointed in procuring the lands he prayed for at Detroit hopes His Excellency may consider him a proper object to be settled in the vicinity of Long Point when surveyed, and consequently prays that such land may be granted to him there as to His Excellency shall seem fit. Ordered that the prayer of the petition be granted when the lands are surveyed for this purpose, and referred to the Acting Surveyor General.

Read the petition of David Mills, by trade a saddler; John Beaman, by trade a nailer, and Lebbeus Porter, by trade a blacksmith, now subjects of the States, who appeared personally before the Board. They are all young men and desirous of settling under the British Government. They consequently pray that a lot in the Town of Newark and two hundred acres of unlocated lands may be granted to each of them. Ordered that the prayer of their petition be granted.

John McFarland, His Majesty's boat builder, came before His Excellency the Lieutenant Governor in Council, and prayed leave to surrender the letters patent originally granted to John McDonell, Esq., and through several assignments purchased by him, and that the same might be granted to himself and his heirs. It appearing that the petitioner has long been and still is in the services of the Crown, and that there is no objection to the prayer of his petition, the said letters patent were received and cancelled accordingly. Ordered that the Attorney General be directed to prepare a grant to the said John McFarland and his heirs upon the same terms, reservations and conditions with the former grant agreeably to the prayer of the surrenderer.

JOHN SMALL.

26th June, 1795.

At the Council Chamber, Newark.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables Peter Russell and AEneas Shaw.

Patrick Haggarty, Donell McCall and John McCall: Petition stating that the petitioner, Patrick Haggarty, being a reduced Captain from the late first battalion of Skinner's Brigade; Donell McCall having served in the late Montgomery's Highlanders, and John McCall, son to the said Donell, they pray in behalf of themselves and a number of loyalists resident in the State of New Jersey that a tract of land be set apart for them and their associates sufficient for the establishment of at least one hundred settlers and that the petitioners and their constituents wish to have it assigned to them on Lake Erie. Ordered that Captain Haggarty, having already received 200 acres of land in Nova Scotia, shall be granted the remainder of his lands as a reduced officer in this Province; that Donell McCall and his three grown up sons, John McCall, Duncan McCall and Daniel McCall, shall receive six hundred acres of land each and that whatever settlers they bring into the Province shall receive two hundred acres upon their recommendation, but no answer can be given to their desire of having their lands assigned to them on Lake Erie until those lands are surveyed. The Surveyor General will consequently inform them when and where they can be accommodated.

John Munro: Petition stating the petitioner having been a Lieutenant in His Majesty's regiment of New Jersey volunteers, and now on half pay, prays for such land as he may be entitled to. Ordered that the usual allowance be granted to him and referred to the Acting Surveyor General for location.

Robert Nellis, late a Lieutenant in the Six Nation Indian Department: Petition stating the petitioner having already received 500 acres of land as part of the quantity His Majesty has been graciously pleased to allow persons of his description, prays that the remainder may be granted to him in any of the unlocated lands of the Province. Ordered that the remainder of the land due to him as a Lieutenant be assigned as near his present residence as the Surveyor General can find convenient.

Edward Hayward, coach maker: Petition stating petitioner being lately come from England and being desirous of settling in the Province, prays for a grant of land and a town lot in the Town of Newark. Ordered that 200 acres of land and a town lot be granted as desired.

Read the memorial of William Nellis, Warner Nellis and Abraham Nellis, setting forth that the father of the memorialists was a Captain on half pay and had previous to his death taken up only 800 acres of land. Memorialists as heirs by will therefore pray His Excellency will please to allow them the remainder of the lands which their father as a Captain was entitled to. Ordered that the prayer of the memorial be granted.

Ezra Dean, in behalf of himself and associates: Praying that the twenty thousand acres granted to them two years since may be kept open for two years longer. Ordered that the twenty thousand acres of land granted Mr. Dean and his associates shall be kept open for two years longer from May last, reserving however to His Excellency in Council the power of granting any vacant part of them to others as shall be judged expedient.

Ezra Dean and company: The petitioners pray to erect buildings on the reserved lands on the Chippawa having found a sufficient quantity of iron ore to carry on iron works there. The prayer of this petition cannot be granted, all mines being reserved, besides a prior petition is lying in the Council Office praying to carry on the same works there.

John Hill: Petition setting forth that after His Majesty's troops evacuated Philadelphia, the petitioner went to New York for protection, having first experienced the effects of persecution in 1780, and entered into Captain Templeton's company of city volunteers. He therefore prays for a grant of 1000 acres of land in the tenth township and a town lot No. 277. Ordered that 600 acres of land and the town lot be granted to him.

The following petitions were read for lots in the Town of Newark, and granted:

Anne Thompson for lot No. 20, John Van Voist for lot No. 108, Alexander

McDonell for lot No. 241, John Young for lot No. 156, William Carver for lot No. 228, Archibald Thompson for lot No. 152, Christopher Danby for lot No. 187, David Kemp for lot No. 19, Dr. Kerr, for lot No. 21, D. Servos for lot No. 138, George Mayne for lot No. 214.

27th June, 1795.

At the Council Chamber, Newark.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables Peter Russell and Æneas Shaw.

William Mayne Duncanson, of London: Petition stating that petitioner having it in his power to bring into the Province of Upper Canada from Europe and elsewhere a number of settlers to the number of four or five hundred families who from their loyalty and attachment to the British Government are desirous of becoming inhabitants of that Province, prays His Excellency will be pleased to grant for their use and accommodation twelve townships on Lake Erie as near Long Point as can be granted, and your memorialist is ready to comply with the necessary and customary form of settlement, as in duty bound shall ever pray. Inadmissible.

Dr. Robert Kerr: Praying for 1000 acres of land in Burlington Bay not having taken up his lands as a reduced officer. Granted.

Joshua Pell: Praying to erect iron works. Inadmissible for the present.

Joshua Pell: Praying for an additional quantity of land to be granted him. Ordered that he shall have a further grant of 500 acres to make up with the 700 acres he has already received, 1200 acres.

Joseph Pell, son of Joshua Pell: Praying for 1000 acres. Ordered that 400 acres be granted him.

Robert Stafford: Ordered to stand over for consideration till be brings further recommendation.

Richard Cockerell: Praying for such lands as His Excellency shall think proper. Ordered that he shall received 200 acres.

Thomas Page: Praying for such lands as His Excellency shall think proper. Ordered that he receive a grant of 200 acres.

Solomon Austin: Praying for 600 acres of land. Granted.

John Hutchins: Stating that during the whole war he had faithfully served His Majesty in different capacities. Ordered that he shall receive a grant of 600 acres of land and a town lot No. 229 in Newark.

John Davis: Praying for a further grant of 800 acres. Rejected.

Adam Hutt: Praying for a gore of land near his present lot, said to contain about 12 acres, that he has never received but 160 acres of land and praying any further addition Your Excellency shall think proper. Referred to the Surveyor General as to the gore, and ordered that he receive a further grant of 200 acres in consideration of his having been settled about seven years.

Peter Weaver: Praying for two lots whereon he had a house with ten acres of land cleared, but on which he had settled without permission, the improvements of which were destroyed three years ago by a hurricane. Ordered to lie over for consideration.

George Thompson: Praying for 2000 acres of land as a reduced Lieutenant in Colonel Byer's Corps. The prayer of the petition inadmissible, having left his regiment before reduction, but in consideration of his having been an officer he shall receive four hundred acres.

Ezra Carver: Praying for an allotment of land as near as possible to Lieutenant Thompson's. Ordered that he receive a grant of 400 acres of land

Levi Lewis: Praying for a further grant of land as a loyalist, having come into this Province seven years since and by reason of sickness has lost great part of his property. Ordered that he receive a grant of 200 acres of land in addition to what he at present possesses, in consideration of his services and his strong recommendation by Mr. Petit.

Jacob Van Alstine: Stating that having lost 350 acres of land which were granted to his father but the latter dying before they could be located, he humbly prays that quantity may be granted to himself in consideration of his having many of his father's debts to pay, and further prays that the Surveyor General may be authorized to erase his father's name from a lot on which it had been inserted by mistake that one Boyce, the ostensible claimant, may receive a certificate for the same. Granted.

The Acting Surveyor General laid before His Excellency and Council a plan for setting apart one-seventh of land for the Protestant clergy, including that laid out before the division of the Province of the different townships, which was approved of.

The Acting Surveyor General laid before the Council a plan of York with the improvements laid down thereon. Ordered that their assignments be prepared by the Acting Surveyor General and that their names be entered. Mr. St. John, Messrs. Cozens, Mr. Demont, Mr. Demont, Connolley and Jones, Cooper, Mr. Bovery, Mr. Smith, Mr. A. Miles, Silas Everet and S. Colby, Lieut. Graham, John Hananam,——Lawrence, Rosse Umpstead, fenced only, Samuel Heron, Thomas Hill, fenced only.

3rd July, 1795.

At the Council Chamber, Newark.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables Peter Russell and Æneas Shaw.

Read the petition of George Neill, a loyalist, stating that he had embodied a number of loyal militia in South Carolina last war, that he had served at the Siege of Ninety-six, and had on every occasion showed himself a firm and determined loyalist, and therefore praying for such portion of land as His Majesty has been graciously pleased to direct to officers in his situation. No voucher having been adduced of his having been an officer, ordered that the petitioner be granted 200 acres of land in addition to his former grant, and referred to the Surveyor General.

Allen McLean, a reduced Lieutenant of the 20th Regiment: Praying for such portion of land as officers of his rank are entitled to. Ordered that the prayer of this petition be granted and referred to the Acting Surveyor General for location.

Nicholas Oille: Stating he was ordered by the Land Board a grant of 400 acres, which he has improved, but having received a ticket for only 300 acres, he prays to be confirmed in his improvement of four hundred acres. Ordered that the petitioner be confirmed in his improvement.

William Coffin: Petitioner stating that he had on account of his loyalty quitted Boston when His Majesty's troops evacuated that town in 1776, that he acted afterwards in the Commissariat Department in every province between Nova Scotia and Florida until the capture of Lord Cornwallis's army, praying for such portion of land as may be deemed adequate to his services. Ordered that the petitioner be granted 1200 acres of land and referred to the Surveyor General for location.

Henry Murney, master of the merchant vessel the Governor Simcoe: Praying for 1200 acres of land and for a town lot in Kingston. Ordered that the petitioner be granted 200 acres of land and referred to the Surveyor General for location.

James Thomas: Petitioner stating that he has been a soldier in the late Sir John Johnson's and 44th Regiments for nearly thirty years and had settled very early in this township by order of Colonel de Peyster and Major Campbell on 130 acres of land, but without any certificate, and praying that he may be confirmed thereon. Referred to the Surveyor General to be reported thereon.

James Mills, a loyalist who had served during the French and American wars: Praying for such lands as his services may entitle him to. Ordered that 300 acres be assigned to him.

William McClellan, a soldier in the late Colonel Butler's Regiment: Petitioner stating that after the reduction he settled where he now lives with a wife and six children, and thereupon received a ticket for 600 acres from the Land Board, that having located only 200 acres, he prays the Council to grant him the remaining 400 acres.

The petitioner further states that he some time ago purchased the right of a Ranger to 100 acres of unlocated lands and prays to be confirmed therein. Ordered that the 400 acres the petitioner asks for be assigned him, but as the transfer of unlocated rights cannot be confirmed, this part of the petitioner's prayer cannot be granted. In consideration however of his good character and his having unwittingly parted with his money for no value, it is ordered that 100 acres of land be granted to the petitioner in addition to his former grant, and referred to the Surveyor General for location.

William Kitchen: Petitioner stating that having been settled upwards of seven years on a gore of land where he has built mills and made other improvements, but not having been able to obtain a grant of the same in consequence of its not being surveyed till last fall, he prays for the blocks C and D in the said gore now part of Grimsby Township, containing 400 acres. Ordered that the prayer of this petition be granted and referred to the Surveyor General for assignments.

Elias Smith: Petitioner stating that he has been in the Province since the year 1788 and that he married the daughter of John Secord, a loyalist, and praying for such lands as are usually granted to loyalists and their children and further stating that he possesses a ticket from the Land Board entitling him to five lots and a half. Ordered that the ticket for 550 acres be confirmed and that fifty acres be granted to the petitioner in addition, and referred to the Surveyor General for assignment.

Abel Stafford: Setting forth that he has a wife and eight children, two of whom are grown up men, and praying for such a portion of land as may enable him to settle with his family in this Province. Ordered that 400 acres of land be assigned to the petitioner, and the grown up part of his family will have lands assigned them on their application.

Bartholomew London, an inhabitant: Stating that he was a firm loyalist during the late war, has frequently been imprisoned for his firm attachment to His Majesty's interest and praying for more lands in consideration of his services and sufferings. Ordered that 200 acres of land be granted to the petitioner in addition to the 200 acres he has already received.

John Steinhoff: Stating he has received a ticket from the Land Board for five lots and a half, and praying for an additional grant of land having a wife and fourteen children. Ordered that the ticket be confirmed, and that 200 acres be granted to the petitioner in addition.

William Steel, a loyalist: Praying for such further quantity of land as may be deemed proper. Rejected.

Arent Bradt: Stating that he was a Captain in the militia under Sir John Johnson, and praying for such quantity of land as allowed to reduced Captains having never taken up but 100 acres. Ordered that 1200 acres of land be granted to the petitioner in addition to the 100 acres he has already received, and referred to the Surveyor General for location.

John Ogilvie, a merchant in the north west trade: Praying for 1200 acres of land near York and a town lot in the Town of York. Ordered that a town lot in York be granted to the petitioner on the stipulated conditions.

John Turney, a Lieutenant in Colonel Butler's late Corps of Rangers: Stating he had received 800 acres of land and praying for the remaining 1200 acres, and for lands for his wife and daughters. Ordered that the 1200 acres be granted to the petitioner in addition to the 800 acres received, and referred to the Surveyor General.

John Austin: Praying for lands as the son of a loyalist who was killed in His Majesty's service at Wilmington. Ordered that 200 acres be granted to him.

Alexander Collins: Stating he had served for seven years in the New York Volunteers and two years with the Queen's Rangers on Staten Island and in Virginia, and praying for two lots which he has improved and lands as a discharged soldier. Ordered that 200 acres including his improvement be granted to the petitioner, and referred to the Surveyor General for assignment.

John Wees, a loyalist: Stating that the Land Board at Kingston had assigned him 600 acres of land, and praying to have a grant of the same in Murray's Town, in the District of Hesse, lots Nos. 23 and 24 in the front lot and lot No. 24 in the second concession. Referred to the Surveyor General.

Jeremiah Beaty: Stating that His Excellency and the Council at York in 1793 had granted him 400 acres of land with permission either to settle on the La Tranche Road or on the Bay of Kente, and praying for a grant of land in the latter. Referred to the Acting Surveyor General.

Abraham Cuyler, Esquire: Praying for a tract of land near Petite Nation as Colonel of a volunteer corps of loyalists during the late war. The prayer of the petition inadmissible, the petitioner not residing in the Province.

Captain William Johnson, half pay Captain in the Indian Department: Stating he had petitioned the Council of Lower Canada for the following lots of land in the Township of Ernest Town, Nos. 37, 38, 39, 40 and 41, second concession; 37, 38, 39, 40 and 41, third concession; 38, and 50 acres No. 39, fourth concession, in all 2250 acres to compleat the quantity he is entitled to of 3000 acres having only drawn 750 acres. Ordered that the petitioner's claim be admitted as to the quantity of land, but referred to the Surveyor General as to the location of the lots prayed for.

Walter Moody, a loyalist: Stating he had faithfully served His Majesty in the American War as a Pilot, and praying for 500 acres of land. Ordered that 300 acres of land be granted to the petitioner in addition to the 200 acres he has already received.

Robert Wilkins, a loyalist: Stating that he had served in the 17th Light Dragoons and was badly wounded, that he afterwards had a command of a company of loyalists and praying for such portion of land as officers of his situation are entitled to. Inadmissible, the petitioner having already received five hundred acres.

John Ryley, a loyalist: Praying for such portion of land in the vicinity of York as to the Council may seem proper. Ordered that he do receive 200 acres in the vicinity of York.

James Pitney: Praying for 200 acres of land near York. Ordered that the prayer of the petition be granted.

William Van Every: Stating that he has considerably improved the land he now lives on in the Township of Stafford and part of which adjoins the gore between the Townships of Stafford and Newark, praying for about 24 acres of land therein. Ordered that the prayer of the petition be granted, and referred to the Surveyor General.

Peter Russell, Esq.: Stating that he had at a considerable expense built a dwelling house and made other improvements on a part of the military reserves in the Township of Newark, and there being thereon but a very small quantity of wood for the purposes of fencing and firing, prays His Excellency to grant him a certain parcel of land adjoining without the military line of reservation at 800 yards distance from the situation reserved for a fort and bounded by lands in the occupation of Arent Bradt, William McClellan, John McFarland, and D. W. Smith, Esq., containing about 100 acres. Ordered that the prayer of the petition be granted.

John Ryler, a discharged soldier of Colonel Butler's Regiment: Praying for such quantity of land as he might be entitled to. Ordered that he do receive a grant of 300 acres.

Peter Lawraway, a discharged soldier: Praying for such quantity of land as he may be entitled to. Ordered that he do receive a grant of 300 acres.

Peter Platt, a discharged soldier: Praying for such quantity of land as he may be entitled to. Ordered that he do receive a grant of 300 acres.

Anthony Dougherty: Stating that he arrived in this Province last year with his family, consisting of a wife and four children, from North Carolina, prays for a grant of land near to Patterson's Creek on Lake Erie. Ordered to lie over.

Solomon Hill: Stating that petitioner faithfully served His Majesty in the Loyal American Regiment commanded by Lieut.-Colonel Beverly Robinson last war, that he has a wife and six children, and being a non-commissioned officer prays for five hundred acres of land as his right and five hundred acres for his family. Ordered that the allowance to non-commissioned officers be granted the petitioner.

Alexander Gardner: Praying for 1200 acres of land having served with the army in America last war, and having lost 400 dollars by his house, near Fort Niagara, being pulled down. Ordered that 200 acres be granted him.

Thomas Mathews: Praying for lots A and B, if vacant, fronting on the River Thames, adjoining the tract lately granted to Ebenezer Allen, containing about 200 acres. Ordered that it be granted the petitioner, and referred to the Acting Surveyor General for location.

Edmond Horton, late of Lieut.-Colonel Butler's Rangers: Stating that petitioner is settled on lot No. 139 in the Township of Newark, for which he has a certificate, that the said lot adjoins the gore of land between Stamford and Newark on which he has cleared about six acres, praying that the part of said gore opposite his lot may be granted him and the remaining 200 acres due to him as a Ranger, pray for the same between the Grand River and Long Point when the same be surveyed. Ordered that the prayer of this petition be granted and referred to the Acting Surveyor General.

Anne Morden: Praying for an additional quantity of land. Resolved that this petition is inadmissible as she received an Order of Council on the 8th of July, 1794, for 400 acres of land to herself and 200 acres for each of her children.

Daniel Gould: Stating that the petitioner being desirous once more of enjoying that liberty and freedom which was ever the basis of the British constitution prays for a grant of 1200 acres of land for himself and family, which consists of fifteen persons, four of his sons men. Ordered that he shall have a grant of four hundred acres, and two hundred acres for each of his four sons, Daniel Green Gould, David Gould, William Gould, and Daniel Scutell, his son-in-law.

Edward McMichael, Captain of Associated Loyalists in His Majesty's service last war: Praying for 3000 acres of land as a Captain serving in America and setting forth that he had a wife and ten children, for whom he prays such portion of land as may seem meet. Ordered that the petitioner, Edward McMichael, be granted three thousand acres of land and referred to the Acting Surveyor General for location.

Alexander McNabb: Read the petition setting forth that his father was surgeon to Major McAlpin's Corps of loyalists until his death, and praying for the lands of his father and 1200 acres of land for himself. Ordered that the petitioner be granted twelve hundred acres.

John Lee Gibson, J. Hall and Robert Randall, citizens of the United States, and their numerous associates: Praying for nine townships. Resolved that the prayer of this petition is inadmissible.

Charles Whitney: Praying for forty thousand acres of land for himself and others. Resolved that this petition is inadmissible.

Read the report of the Acting Surveyor General on the petitions of James Smith, Hazelton Spencer and William Merrick.

Read the petition of Henry Bolton with the Surveyor General's report thereon. Resolved that this petition is inadmissible.

The Lieutenant Governor laid before the Council an extract from the Duke of Portland's letter to him dated 7th November, 1794, viz: The Table of Fees transmitted in No. 30 is not at all conformable to the legal Table of Fees established for the Province of Nova Scotia, a copy of which was transmitted to Lord Dorchester by Mr. Secretary Dundas in a letter to His Lordship (of which the within is an extract) with a copy of the Table it refers to, and which you will consider as your guide in amending the Table you have now inclosed to me. His Excellency informed the Council that the extract to which the Duke of Portland refers was not included in the letter and that in consequence thereof he had immediate recourse to Lord Dorchester, and has received from His Lordship this day what he presumes to be the extract alluded to, together with the Table of Fees established in the Province of Nova Scotia. His Excellency laid these papers before the Council. Ordered that they lie on the table for consideration.

List of fees upon the grants of land to be taken by the several officers in the Province of Nova Scotia as established in 1764, and confirmed in 1774:

Governor's Fees:	£	s.	d.
For the Great Seal to every grant not exceeding 1,000 acres	0	10	0
For all grants exceeding 1,000 acres for every 1,000 each grant contains	0	5	0
For a license of occupation	0	10	0
Secretary's Fees:			
For every grant and passing the Seal of the Province if under 100 acres	0	10	0
Between 100 and 500 acres	1	0	0
All above	1	10	0
In grants of land when the proprietors shall exceed 20 in number, each right	0	5	0

	£	s.	d.
Ditto when the number of proprietors shall not exceed 20, the same as for grants in proportion to the quantity of land. .			
For every license of occupation	0	5	0
For every grant of land from 1,000 to 20,000 acres, take for the first 1,000 acres	1	10	0
And for every 1,000 acres more	0	5	0
Fees taken by the Chief Surveyor of Lands:			
For every lot under 100 acres	0	5	0
From 100 to 500	0	10	0
Above 500 acres	0	15	0
Every township, if above 20 rights, each right	0	5	0
Register's Fees:			
For recording a grant of land for or under 500 acres	0	2	6
For recording a grant of land from 500 to 1,000 acres	0	5	0
For every 1,000 acres to the amount of 20,000	0	1	0
For recording a grant of a township	2	0	0

N.B.—This list includes fees to all the persons concerned in granting lands except to the Provincial Land Officers of the Crown.

(Signed) J. H. August 14th, 1793.

4th July, 1795.

At the Council Chamber, Newark.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables Peter Russell and Æneas Shaw.

Captain J. Breakenridge: Stating that the petitioner was a reduced Captain in the late Corps of King's Rangers and that he is entered on the plan of the Township of Oxford in the Eastern District for one thousand, eight hundred, such lands being a part due to him for his services, prays that the Acting Surveyor General be directed to assign him the same. Ordered that the prayer of the petition be granted.

John Smith, Sen.: Stating that the petitioner on his arrival into this country with his family, consisting of a wife, three sons and five daughters, he and his sons, William, John and Joseph, were included in a petition by James Wilson and associates, and that his sons in consequence thereof settled on lands in the Township of Ancaster, that the petitioner has not yet located any lands, therefore prays that he and the remainder of his family may have a grant near Long Point when the same shall be surveyed. Ordered that the prayer of the petitioner be granted when surveyed, 750 acres.

John Grant, of Lachine: Stating that the petitioner was a settler at the Fort of Oswagatchie and Carleton Island during the late American War and that the petitioner's house was burnt by the rebel Indians in 1779 at the Fort of Oswagatchie, and his store house at the same place pulled down and destroyed, as by the annexed certificate. Your petitioner has been always attached to the British Government and has never received any compensation, prays for a grant of 1200 acres of land in the Township of Hawkesbury as follows, lot 25 in the second concession, 200 acres, and lots Nos. 22, 23, 24, 25 and 26 in the first concession. Ordered that the prayer of the petition be granted, and referred to the Acting Surveyor General.

James Farr: Stating that the petitioner is lately come into the Province with Joseph Keeler, who obtained a grant for one-half of a township in the rear of Haldimand, the other half at that time being reserved. Your petitioner comes forward in behalf of himself and a number of respectable associates to occupy the remaining half of the said township on the same conditions as the half granted to Mr. Keeler. Your petitioner in conjunction with Mr. Keeler has sent forward upwards of twenty settlers with implements of husbandry and therefore prays the same may be granted to him and his associates. Ordered that the other half of the township granted to Joseph Keeler in the rear of Haldimand be granted to James Farr and his associates.

Mr. Joseph Keeler appeared personally and prayed that the out lines of his tract might be run. Ordered accordingly, and that the Acting Surveyor General be directed to appoint a person for that purpose.

Thomas Dewey appeared personally and prayed for the out lines of his tract to be run. Ordered that the Acting Surveyor General be directed to have them run.

Mr. Demont's letter to Mr. Aitkins, Deputy Surveyor, was read in Council, praying to have assigned to him lot No. 22 in the third concession and lot No. 2, same concession, in the County of York. Ordered that the same be granted.

Read the petition of Frederick Ford, who appeared personally and prayed for 1200 acres of land for himself and a portion of land for each of the persons mentioned in the petition. Ordered that the petitioner, Frederick Ford, shall have a grant of eight hundred acres; James Duglas, six hundred acres; John Duglass, four hundred acres; Orange Troop, four hundred acres; William Duglas, two hundred acres; Asa Duglas, two hundred acres; Samuel Troop, 200 acres, and Daniel Troop, 200 acres.

Upon the report of the Acting Surveyor General who was called on relative to the situation of the Townships of Escourt and Young, ordered that on account of the smallness of Escourt, it be attached to and comprehended within the Township of Young.

8th July, 1795.

At the Council Chamber.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables Peter Russell and Æneas Shaw.

Hugh Johns: Stating that he has resided in the County of Leeds ever since the year 1787 and, having received only 100 acres, prays for a further grant to his wife and four children. Ordered that Hugh Johns shall have an additional grant of 200 acres.

Samuel Caswell: Stating that he joined the King's Rangers as a Sergeant in the year 1780, and in the year 1784 became a settler in the Province with other disbanded troops, and received 200 acres of land only. Prays for a further portion such as His Excellency may seem meet. Ordered that he shall have an additional grant of three hundred acres.

Enoch Srigley: Stating that he arrived in this Province on the 8th day of October, 1788, with his wife and six children, with certificates of his loyalty which accompany this petition. Petitioner therefore prays that His Excellency will grant him six hundred acres of land within the Township of Pelham. Ordered that reference be had to the Surveyor General for the petitioner's certificate and family lands.

William Shaw: Stating that your petitioner entered in His Majesty's service in the 52nd Regt. in the year 1774, and transferred from it to the 5th Regt. in America in 1778, soon after which he was made a non-commissioned officer and served for some years as a Sergeant of Grenadiers, in which capacity he was discharged and has settled himself in this Province with the means of cultivating lands, having about £500 York currency; that petitioner married the daughter of a loyalist near Detroit by whom he has children, and when the militia volunteered their services to repel Mr. Wayne's invasion, your memorialist lent his aid in the capacity of Ensign and did duty as such in Detroit. Therefore prays His Excellency to extend to him the King's benevolence in a grant of land and to order the usual allowance to his wife. Ordered that the petitioner be granted 700 acres.

Sarah Buck: Stating that her husband was appointed Quarter Master in a corps of provincials in the year 1777; that he did duty and received pay during the campaign with General Burgoyne. Prays for such portion of land as His Excellency may think proper. Ordered that she shall have a grant of two hundred acres.

Reference from the Land Board of Grenville and Leeds being taken into consideration:

On the petition of Mathew Howard: Stating that he served in the late American War as a Subaltern officer, as appears by his vouchers and having drawn only 950 acres of land conceives himself entitled by a late order of Government to 1050 acres more to put him on an equal footing of the 84th Regt. and prays it may be granted him. The Board having considered the petitioner's claim, services and sufferings, humbly recommend him to His Excellency the Governor in Council for 1050 acres of land in addition agreeable to the prayer of the petition. Ordered that the additional quantity be granted, upon the recommendation of the Land Board.

On the petition of Archibald McNeil: Stating that his father was divested of property to the amount of three thousand pounds lawful money in consequence of his loyalty and attachment to the British Government during the late American War. The Board being convinced of the petitioner's father's sufferings and his own merits, do grant him 200 acres of land and humbly recommend him to His Excellency the Governor in Council for eight hundred acres more. Ordered upon the recommendation of the Land Board, that the petitioner shall have six hundred acres in addition.

On the petition of Foster Page: Stating his wish to become a subject to His Majesty and a settler in the Province. The Land Board of Grenville and Leeds grant him 200 acres at the same time considering him a person of influence and worth and one who by his interest and connections may be useful in promoting the settlement of the Province, do humbly recommend him to His Excellency in Council for one thousand acres. Ordered that the prayer of the petition be granted.

Read the petitions of Matthew Howard, Foster Page, and Archibald McNeil: Stating your petitioners having certificates for lands, and recommended for additional quantity by the Land Board of Grenville and Leeds, have been and explored a tract of land situated by and near a falls on a creek that empties itself from the west into the lower Lake of Gananochque, which situation will admit of a good settlement, that a number of inhabitants have been waiting several years with blank certificates. Your memorialists pray His Excellency may be graciously pleased to allow them to locate their lands where above stated, together with the falls on said creek, and to others applying having certificates. Ordered to be referred to the Surveyor General for location.

Captain James Brekenridge appeared personally and requested that the lands might be assigned him. Ordered that the Acting Surveyor General assign the same.

The Board having taken into consideration the Table of Fees on grants of land transmitted to His Excellency the Lieutenant Governor by His Majesty's Secretary of State, came to the following resolution: Resolved that the resolution of Council dated the sixth of November, 1794, establishing certain fees on grants of land shall be rescinded. Resolved that the present Table of Fees shall be established, viz:

	£	s.	d.
On grants of 100 acres of land and under	1	14	2
On those above 100 and not exceeding 500	2	9	2
On those above 500 and not exceeding 1,000	3	6	8
On all grants above 1,000 acres on each 1,000 acres above the first 1,000 in addition	0	11	0
If the number of proprietors in any grant shall exceed 20, a further fee on each right of	0	5	0
Besides the above fees to be paid on taking out the grant a fee is to be paid on issuing every license of occupation of	0	15	0

Resolved that as the license of occupation issued from the Council office and not from that of the Secretary of the Province, the Clerk of the Council is entitled to the fee of five shillings and not the Secretary.

Resolved that the above Table of Fees shall be published and made known as soon as possible.

11th July, 1795.

At the Council Chamber, Newark.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables Peter Russell and AEneas Shaw.

The Board having taken into consideration a claim of Peter Secord to lots Nos. 93, 94, 95, in the Township of Newark which had been granted to him under an Order of Council dated July 15th, 1794, and finding from the report of the Acting Surveyor General that those lands had been previously granted and assigned to Mr. Justice Powell, have resolved that their Order of Council dated 15th of July, 1794, by which Nos. 93, 94, 95, were granted to Peter Secord be hereby rescinded, and do order that four hundred acres of land shall be granted to Peter Secord in lieu thereof, and the Surveyor General be directed to assign the same.

John Hardey: Stating that he served as a Sergeant in the 84th Regt. eight years. Petitioner has five brothers that wish to become settlers in the Province. Ordered that John Hardey as a reduced Sergeant shall have a grant of 500 acres, and 200 acres to each of his brothers.

Read the petition of Alexander Hardey: Praying for such lands as may be deemed proper. Ordered that the petitioner shall have a grant of two hundred acres.

Read the petition of John Garner: Stating that your petitioner's father (Mathew Garner) served His Majesty in the American War and has empowered your petitioner to locate 300 acres of his land due to him as a soldier. Your petitioner also served in the said Corps of Rangers, and obtained a certificate in 1789 for 550 acres, 250 of which were granted his wife and children, but has located only 200 acres, therefore prays for 300 acres on account of his father and 350 acres on account of himself and family. Ordered that that part respecting his father is inadmissible, but that 550 acres be confirmed to him agreeable to the certificate of the Land Board.

Read the petition of Roger Conat: Stating that your petitioner has been in the Province upwards of two years with his family and petitioned Your Excellency for 800 acres of land in Darlington which at that time could not be granted by reason of its being a granted township. Therefore prays for the like quantity of the ungranted lands of the Crown. Ordered that he shall have four hundred acres for himself and two hundred acres for each of his sons, Abel Conat, Eliphalet Conat and Jeremiah Conat, in the Township of Darlington with the broken fronts.

Read the petition of Seth Hamlin: Stating that he has been in the Province upwards of two years with intention of settling in the Township of Darlington, granted to Messrs. Pearce and associates, and wherein he has made improvements but having heard the above mentioned gentleman has not as yet complied with the terms required by Government, presumes the township may revert to the Crown. Therefore prays for 600 acres. Ordered that a lot be granted the petitioner in Darlington and the broken front of said lot.

Read the petition of Daniel Murphy: Stating that your petitioner has always been a loyal subject to the Crown of Great Britain, prays for such portion of land as may be thought proper. Ordered that he shall have a grant of two hundred acres.

Read the petition of James Forsyth: Stating the petitioner to have been in the Province 12 years and brought with him a wife and five children. He has received 200 acres only and prays for a further grant. Ordered that he shall have four hundred acres in addition.

Read the petition of Michael Andrew Meyers: Stating that he served in the 1st Battalion of the 60th Regiment of Foot 25 years, the greater part as a non-commissioned officer as appears from his discharge, prays for 500 acres of land. Ordered that the prayer of the petition be granted.

Read the petition of Bernard Frey: Stating that your petitioner served as Captain in Lieut.-Col. Butler's. When disbanded he settled and improved on 300 acres of land in the vicinity of Newark, which is all he has located. Therefore prays for a further grant of twenty-seven hundred acres to complete the 3000 acres due to him, and likewise an allotment for his wife, she being within His Majesty's lines during the American War. Ordered that the petitioner's allowance as Captain be made up to him.

Read the petition of John Wray: Stating that he served as a private in the 1st Battalion of the 60th Regiment for the space of six years. Prays for 300 acres of land. Ordered that he shall have 200 acres.

Read the petition of George Miller, late of Butler's Rangers: That your petitioner served during the war in the said corps, is now settled in the 9th, or Township of Thorold, on 250 acres which he has very considerably improved, prays for the remaining 50 acres which may be due to him, and the like quantity for his wife and for his four sons, 50 each. Ordered that the same be granted.

Read the petition of Isaac Horton: Stating that when your petitioner came into the Province in the year 1786, Major Campbell gave him liberty to go upon lands which are now occupied by others. Prays for a location elsewhere. Ordered that he shall have 200 acres.

Read the petition of Samuel Marther: Stating that your petitioner is from Long Island where his family were distinguished during the late war for their attachment to Great Britain; that he came into the Province about eighteen months since, where he has married and wishes to settle. Prays for a portion of land in the township on the Thames wherein Mr. Ebenezer Allen has a grant above the Delaware village; that his wife, late Dorothy Defries, is the daughter of a loyalist (U.E.) and prays that she may have a grant of 200 acres. Ordered that Samuel Marther shall have a grant of 200 acres for himself and 200 acres for his wife provided she be a loyalist (U.E.).

15th July, 1795.

At the Council Chamber, Newark.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables Peter Russell and AEneas Shaw.

Read the petition of Captain Ryerse praying for his location of land due to him as a Captain, and for family lands. Ordered 3000 acres granted as

Captain, he having relinquished to Government the 700 acres granted to him in the Province of New Brunswick. Family lands refused as he does not come under the description of loyalists entitled to that bounty.

Read the petition of Weart Banta praying for his location of lands as a Lieutenant last war. Ordered that the same be granted.

Read the petition of Robert Howey: Stating that he served His Majesty in the American War in the New Jersey Volunteers, that he has brought his wife and seven children into the Province, and prays for a proportionable quantity of land to settle upon. Ordered that he shall have a grant of four hundred acres.

Read the petition of Isaac Davis: Stating that he joined General Howe's army last war as an artificer, and continued till the conclusion of it, that he is arrived in this Province with a wife and five children, and prays for a grant of land to improve upon. Ordered that he shall have a grant of four hundred acres.

Read the petition of Thomas Stead: Stating that he lately came from Worcester in Britain and by profession a Millwright and Engineer, has a wife and eight children. Prays for a grant of land as contiguous as may be to Captain Ryerson's. Ordered that he shall have four hundred acres.

Read the petition of John McGlashan: Stating that he is a native of North Britain, that he is embarked to settle in the Province, and prays for land to improve upon. Ordered that he shall have a grant of 200 acres.

Read the petition of Henry Johnson: Stating that he has been a settler in the Province near nine years and having received only 100 acres for himself and family, prays for a further grant. Ordered that he shall have a grant of three hundred and fifty acres in addition to make up the 450 he is entitled to.

Read the petition of John Fanning: Stating to have been in the Province above eight years and to have married the daughter of a loyalist, and praying for six hundred acres of land. Ordered that he shall have a grant of two hundred acres.

Read the petition of Joseph Brown, who served in Col. Butler's Rangers: Stating that he has a wife and two children and that he has been settled in this Province since the year 1784, and has received 100 acres of land only in the Township of Grantham, which he has much improved. Prays His Excellency for an additional 200 acres in said township, if vacant. Ordered that the same be granted.

Read the petition of John Taylor, Sen.: Stating that he came into this Province with his wife and four children in the year 1788 and upon application to the Land Board for land, was directed to look out for some, which he did in the Township of Pelham and received a ticket from the Board for four lots and half, but the lands not having been surveyed till the last spring, your petitioner has not received any certificate. Therefore prays for a grant of four hundred and fifty acres of land. Ordered that it be granted.

Read the petition of Abel Land: Stating that he served under Your Excellency last war, that he has only drawn 200 acres though he has a wife, the daughter of a loyalist, and five children, four of whom are boys, and praying for a further additional quantity of land. Ordered four hundred acres in addition.

Read the petition of Robert Land: Stating that he is the son of a zealous and active loyalist, that he is arrived in this Province and desirous of locating lands to settle upon. Ordered that he shall have a grant of 200 acres.

Read the petition of John Neil: Stating that he is a native of Ireland, that in the year 1784 he came into this Province where he has remained ever since, and praying for a portion of the vacant land of the Crown. Ordered that he shall have a grant of 200 acres.

Read the petition of Thomas Stratton: Stating that he served several years on board His Majesty's navy as Carpenter's Mate, and in this country since the year 1782 has served in the same capacity on Lake Champlain and at the Miami, and praying for a grant of six hundred acres of land on the River Thames, in the township above the Delaware village. Ordered that he shall have a grant of 200 acres.

Read the petition of Morgan D. Shay: Stating that he came into this Province in June, 1794, with his family and property, therefore prays for four hundred acres of land to improve upon. The petitioner recommended by Nath Pettit, Esquire. Ordered that the petitioner shall have a grant of four hundred acres.

Read the petition of Joseph Chambers: Stating that your petitioner arrived in this Province near seven years since and being encouraged by the then commanding officer to settle upon lands, he pitched upon lots Nos. 21 and 22 in the 6th township, first concession with the broken fronts. Prays to be confirmed in those lots which he has improved, and that they may be assigned to him. Ordered to be assigned to him if vacant, and referred to the Acting Surveyor General.

Read the petition of James Rough: Stating that he served in His Majesty's navy in the late American war five years, that he has been eleven years a resident in this Province and six years a settler on a single lot of land granted to him in right of his services. Your petitioner has a wife and a growing family and prays for the remainder of his land, and any additional quantity His Excellency may think proper. Ordered that he shall have 200 acres.

Read the petition of John Scadding: Stating that your petitioner is desirous to become a permanent settler in this Province, that he has had a grant of 200 acres and prays His Excellency to grant him such further quantity as he shall think meet. Ordered that he shall have one thousand acres in addition.

Read the petition of David McFall: Stating that petitioner obtained an Order of Council for 3000 acres of land in the Eastern District bearing date 27th May, 1794, if vacant. Your petitioner begs to observe that he has been thirty-five years in His Majesty's service and prays for a grant of 1900 acres in the vicinity of Long Point, which number of acres remains due to him. Ordered to be referred to the Surveyor General for location.

Read the petition of Thomas Sparham: Stating that your petitioner served during the late war as Hospital Mate on the staff in Canada and was reduced at the peace, when he received 500 acres of land. Further states that he is an old servant of Government, having served during the war that ended in 1763. Therefore prays that an additional 1500 acres will be granted to him. Ordered that the prayer of the petition be granted.

18th July, 1795.

At the Council Chamber.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables Peter Russell and AEneas Shaw.

Took into consideration the Fee Bill.

Adjourned to Tuesday.

21st July, 1795.

At the Council Chamber.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables Peter Russell and AEneas Shaw.

Resolved that the Table of Fees relative to the grants of land as directed in Council on the 6th of July, 1794, be cancelled.

Resolved that the subjoined Fee Table of Nova Scotia, transmitted by Lord Dorchester to Lieutenant Governor Simcoe on the 25th May, 1795, be adopted as the Table of Fees to be taken on all grants of land made in this Province, agreeably to the direction of His Grace the Duke of Portland, one of His Majesty's principal Secretaries of State, contained in his letter of the 7th November, 1794, to Lieutenant Governor Simcoe, of which the following is an extract:

"The Table of Fees transmitted in No. 30, that of July 6th, 1794, is not at all conformable to the legal Table of Fees established for the Province of Nova Scotia, a copy of which was transmitted to Lord Dorchester by Mr. Secretary Dundas in a letter to His Lordship (of which the within is an extract) with a copy of the Table it refers to, and which you will consider as your guide in amending the Table you have now enclosed to me."

List of fees upon the grants of land to be taken by the several officers in the Province of Nova Scotia, as established in 1764 and

Governor's Fees:	£	s.	d.
For the Great Seal to every grant not exceeding 1,000 acres	0	10	0
For all grants exceeding 1,000 acres for every 1,000 each grant contains	0	5	0
For a license of occupation	0	10	0
Secretary's Fees:			
For every grant and passing the Seal of the Province if under 100 acres	0	10	0
Between 100 and 500 acres	1	0	0
All above	1	10	0
In grants of land where the proprietors shall exceed 20 in number, each right	0	5	0
Proprietors shall not exceed 20, the same as for grants in proportion to the quantity of land.			
For every license of occupation of land	0	5	0
For every grant of land from 1,000 to 20,000 acres take for the first 1,000	1	10	0
And for every 1,000 more	0	5	0
Fees taken by the Chief Surveyor of Land:			
For every lot under 100 acres	0	5	0
From 100 to 500	0	10	0
Above 500	0	15	0
Every township if above 20 rights, each right	0	5	0
Auditor's Fees:			
For auditing of every grant	0	6	8
Register's Fees:			
For recording a grant of land for or under 500 acres	0	2	6
For recording a grant of land from 500 acres to 1,000 acres	0	5	0
For every 1,000 acres to the amount of 20,000	0	1	0
For recording a grant of a township	2	0	0

N.B.—This list includes fees to all the persons concerned in granting lands except to the Provincial Land Officers of the Crown.

Resolved that half of the fees allowed in the Table aforesaid to the Secretary of the Province be deducted and reserved for the Attorney General as a reasonable and proportionate fee.

Resolved that the fee for the license of occupation allowed by the Table aforesaid to the Secretary of the Province be given to the Clerk of the Council through whom the license of occupation must issue.

Resolved that the following fees be allowed to the Provincial Officers of the Crown concerned in the grants of land:—

	£	s.	d.
Clerk of the Council:			
Reading a petition and entering it in the Council Book	0	1	6
For every license of occupation or assignment	0	5	0
To the Surveyor General:			
For the search	0	1	6
For an assignment	0	1	0
To the Deputy Surveyor in their several districts:			
For the search	0	1	0
For the assignment	0	1	6
To the Deputy Surveyor General of the Woods:			
For 100 acres to 500	0	1	0
All above	0	2	0

Resolved that the Proclamation of November the 6th, 1794, be printed and that the fees now established be added thereto instead of those which had been formerly adopted, and that such fees be held as valid and continue in force until His Majesty's pleasure shall be signified thereon.

Resolved that the copy of the fees allowed to the several officers in respect to the grants of land be framed and hung up in the respective offices authenticated by the Clerk of the Council.

21st July, 1795.

At the Council Chamber.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables Peter Russell and AEneas Shaw.

Resolved that the fees upon Magistrates' certificates for two hundred acres to be taken as under:

	Halifax Currency		
	£	s.	d.
The fee to the Magistrate who administers the oath and grants the certificate	0	1	0
To the Deputy Surveyor for the search	0	1	6
For the assignment	0	1	0
To the Governor for license of occupation	0	10	0
To the Clerk of the Council	0	5	0
Title deed when the grant is delivered	2	10	2

N.B.—This list includes fees to all persons concerned in granting lands except to the Provincial Land Officers of the Crown.

Read the petition of Helena McDonell: Stating that at the earliest appearance of hostilities her husband not only professed loyalty but appeared openly in arms at the head of upwards of two hundred Highlanders; that he was forced into a capitulation by General Schuyler at the head of 5600 rebels, by which your petitioner's husband, his brother and four nephews, were carried into confinement several years and they only of the party. Petitioner prays that His Excellency will be pleased to give directions to the Acting Surveyor General to assign your petitioner in her own right 1200 acres of the vacant lands of the Crown in such part of this district as may be eligible and assignable. Ordered that the same be granted.

Read the petition of Alexander McDonell, Sheriff of the Home District, praying for 1200 acres of land exclusive of a former grant for services. Inadmissible.

22nd July, 1795.

At the Council Chamber.

Present: The Honourables Alexander Grant, Peter Russell and AEneas Shaw.

His Excellency the Lieutenant Governor was pleased to order the accounts of the Province to be laid before the Council for inspection and audit from the 30th of June to the 31st of December, 1794. In consequence, the Board were pleased to examine the following accounts:

		£	s.	d.
No. I.	Of the Hon. Peter Russell, Receiver General, amounting to	6,073	1	2
	Balance to be carried to the next half year's account....	6,188	15	0 2/4
		£12,261	16	2 2/4
No. II.	Those of His Excellency, the Lieutenant Governor's office amounting to..................................	743	17	4¼¾
	Balance remaining in His Excellency, the Lieutenant Governor's office..............................	573	15	3
	Total accounted for....................sterling	£1,317	12	7¼¾
No. III.	Of D. W. Smith, Acting Surveyor General, from 10th April to 10th October, 1794. Total amount dollars at 5/........................	£2,378	14	5
No. IV.	Of William Jarvis, Esq., Secretary of the Province, amounting to Halifax Currency..........................	£108	6	5
No. V.	William Jarvis, do, for fees due to His Excellency the Lieut. Governor. Quebec Currency...............	£45	10	0
No. VI.	Of John Small, Clerk of the Council, his general account in the office, total amount...................sterling	£111	13	0
No. VII.	Of John White, Esq., Attorney General, the amount of his account for fees.........................sterling	£91	7	0
No. VIII.	Of Captain John McGill, Commissary of Stores and Provisions, total amount..........................	£367	17	8 7/10
	By disbursements in the apartment...................	347	1	7¾
	Balance remaining in hand......................	£20	16	0¼7/10
No. IX.	Of Lieutenant Pilkington, Engineer, to amount of abstracts for erecting a saw mill at York.....................	£299	18	10
	To ditto of pay list for services performed at Navy Hall..	5	5	9
	To ditto of disbursements for services at Col. Butler's Rangers Barracks, paid at Quebec and remitted to His Excellency Lieutenant Governor Simcoe for payment.	85	16	9
	By a warrant on the Receiver General bearing date 14 March, 1793..	£280	0	0
	Balance due...	111	1	4
	Quebec Currency..............................	£391	1	4
No. X.	Of Walter Roe, Esquire, Detroit. For business done as Clerk to His Majesty's Court of Oyer and Terminer, and General Gaol Delivery for the Western District, under a commission of His Excellency Lieutenant Governor Simcoe, amounting to sterling...	£28	11	0

The Board find the expenditure of the above accounts properly authorized and vouched, certify the same to be regular, orderly, and to the best of their belief, just and true, and signed by the Hon. Alexander Grant.

JOHN SMALL.

29th July, 1795.

At the Council Chamber, Newark.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables Alexander Grant, Peter Russell and AEneas Shaw.

Read the petition of John Parker, a loyalist who had faithfully served His Majesty during the American War, and praying for 600 acres of land in the Township of Wainfleet in addition to what he has received; that he came into the Province two years since and. brought with him his wife and seven children. Ordered that he do receive four hundred acres as family lands.

Philip Henry: The petitioner served as a soldier during the last war and was taken prisoner in Virginia. Prays for four hundred acres of land in addition to the two hundred he has already received. Ordered that four hundred acres be granted as family lands.

Henry Docksteder: Stating that he had not as yet drawn any land the seven years in the Province owing chiefly to having purchased an improvement on lands not surveyed until last year, and prays for 600 acres of land. Ordered that Henry Docksteder have a grant of four hundred acres; Henry Docksteder Junior, two hundred acres, and the sons of George Aaron Docksteder, two hundred acres each. Referred for location to the Surveyor General.

John Donaldson, a soldier in 55th Regt: Stating the petitioner to have received from the Land Board a ticket for four lots of which he has taken up but one. Prays that the same may be confirmed to him. Ordered the grant to be made up four hundred acres.

Lawrence Feehry: Stating the petitioner to have served His Majesty four years in the Marine Department of Lake Erie. Praying for a grant of 400 acres. Ordered that he do receive a grant of two hundred acres in the vicinity of Long Point.

John McFarland: Stating that he had served His Majesty in various situations, and praying for 1000 acres of land. Ordered that he do receive a grant of five hundred acres.

Henry Weishuhn, late Sergeant Major in the 60th Regt: Praying for lands for himself and family lands for his wife and five children. Ordered that he do receive a grant of eight hundred acres for himself and family.

William Wilson: Stating that during the whole of the American War the petitioner's father and family faithfully served His Majesty, and praying for one thousand acres of land. Ordered that he do receive a grant of 200 acres.

Thomas Clark: Stating that he had settled on Nos. 20 and 21, first township on the River Thames, and had permission from Lieut. Governor Hay to settle thereon on consideration of his making a sufficient recompense to the Indians, who many years since obtained a tract of land off the Chippawa Indians as a gift including the above lots, and praying for a grant of the same. Inadmissible, the memorialist liable to punishment for the illegality of his conduct.

William Bond: Stating that he had received six hundred acres of land which he has improved, and praying for six hundred acres more. Not admissible.

Simeon Garrit, of the State of Vermont: Praying for a grant of 1000 acres of land. Rejected.

Ezekeel Woodruff: Stating the petitioner wishing to become a settler in this Province, and prays for a grant of land in Kettle Creek. Ordered that he do receive a grant of six hundred acres of land, and referred for location to the Surveyor General.

Ruben Clarke: Praying for an allotment of land and a town lot at Newark. Ordered that he do receive a town lot.

Read the memorial of the Honourable AEneas Shaw, stating that your memorialist's claim to 3000 acres of land as a reduced Captain in the Queen's Rangers has been admitted and that he has already located in New Brunswick and this Province 2100 acres thereof, and praying to be permitted to locate the remaining 900 acres of land in the Townships of Whitby or Darlington, or such other township on the north side of Lake Ontario. Ordered that it be granted.

Read the memorial of Capt. John McGill, of the late Queen's Rangers, stating that your memorialist had already received 1000 acres in the Township of Flamborough as a part of the 3000 acres he is entitled to, and prays for lots Nos. 7, 8, 10 and 11, second concession west side of Young Street, with the remainder of his lands in the Townships of Whitby, Darlington, or any other township on the north side of Lake Ontario. Granted and referred to the Surveyor General for location.

Read the petition of Alexis Maisonville, stating that your petitioner served as Captain with Governor Hamilton and not having yet received any lands, prays that the Surveyor General may be directed to assign him the same, and further praying in consideration of the many losses he has sustained by his attachment to His Majesty, Your Excellency will please to grant to his eldest son 1200 acres and to grant to his other children 600 acres that his children may not suffer in their patrimony by the losses sustained by the petitioner. Ordered that Alexis Maisonville's lands be granted as Captain, and that his son, Alexis Maisonville, have a grant of 1200 acres, and to his other children, Toussaint 600 acres, Barnard 600 acres, Francois 600 acres, George 600 acres, Victoire 200 acres, Pelogie 200 acres.

John Thompson, late Corporal in the 80th Regt.: Stating that he served His Majesty six years in this country and has since resided in it ten years and has only received 180 acres of land in Stamford, and praying for the remaining quantity of land due to him as a discharged soldier, and such lands for his family consisting of a wife and six children. Granted, and family lands.

Daniel Gleeson, a soldier in the 84th Regt: Stating the petitioner to be heir to Peter Groshee, deceased, late of Detroit and formerly 8 years a soldier in the 84th Regt. Praying for the quantity of land due to Peter Groshee, and for three hundred acres in his own right. Ordered that he do receive a grant of 400 acres but the claim as to Peter Groshee inadmissible.

John Clendennin: Praying for his land having served as a private in the Jersey Volunteers and also for his wife and five children, as is usually granted to loyalists. Ordered that it be granted.

Walter Clendennin: Praying for his land having served as a private in Col. Butler's late Rangers, that he has taken up 200 acres of what he is entitled to. He married the daughter of Jacob Walker, late a Ranger, and has three children, therefore prays the usual quantity may be allowed him. Ordered that it be granted.

Abraham Clendennin: Stating that he has taken up 200 acres of land, and praying for the land due to him having served as a Ranger, that he married the daughter of John Hainer, a late Ranger, and has three children. Prays for the usual quantity. Ordered that it be granted.

Joseph Cooper: Stating the petitioner to be anxious to become a settler and prays for land. Ordered that he do receive 200 acres, and referred to the Surveyor General for location.

Abraham Iredele: Stating the petitioner to have served His Majesty as a Lieutenant in the Corps of Guides and Pioneers in the American War, and praying for 2000 acres, and also for his brother's land as Lieutenant in the armed boat service in New York. Ordered that he shall have a grant of two thousand acres, but that part respecting his brother's claim inadmissible.

Daniel Fraser and Martin Stover, loyalists: Stating that your petitioners served during the late war and have been settled in this country since the year 1784 in the second concession of Ernest Town, Bay of Quinté, that since the division lines of their respective lots have been run out it has been discovered that part of their respective improvements fall in a gore of vacant land of about 90 acres, which is part of No. 18 in second concession of Ernest Town, for which your petitioners have made application to the Surveyor, who refers them to Your Excellency. Petitioners therefore pray that the said gore of vacant land may be granted to them in order to secure to them the peaceable possession of their improvements. Ordered to be referred to the Surveyor General to be reported upon.

Solomon Secord: Stating the petitioner to have served in Col. Butler's Corps of Rangers as Lieutenant and has only located 700 acres of land. Prays the 1300 acres due to him for past services be granted, 400 acres near Patterson's Creek, 400 near Turkey Point, and 500 west of Turkey Point and fronting the Bay of Long Point. Your petitioner has a wife and five children and also prays for family lands. Ordered that the prayer of the petition be granted, and referred to the Surveyor General for location.

Read the petition of Joshua Booth, Esq., in behalf of the inhabitants of Ernest Town, stating that by the incorrectness of the different surveys heretofore made of the said town, they have committed various mistakes on clearing on each other's lands, and prays Your Excellency will be pleased to order a surveyor to adjust the lines and settle the course of the same. Ordered to be referred to the Surveyor General for execution.

The Surveyor General being called upon, informs the Council that Abel Stephens received an Order of Council for lands in Scarborough but not liking that township he went down to Oswegatche and as he had heard under the encouragement of the Land Board, sat himself down in the rear of Young. It now appears that those lands which Stephens had occupied come within the granted township, but two years having elapsed since the order of survey and no assignments having issued from the Surveyor's office, the Lieutenant Governor and Council are of opinion that Abel Stephens and his associates should be confirmed in their improvements, not being on the reserved lots, and a sufficient part of the lands contiguous laid off for those settlers who, he says, are ready to come into the Province; but should the grantees of the township be ready to settle these lands before Stephens, they are to have the preference.

The Clerk of the Council be directed to communicate this resolution to Abel Stephens and the grantees of the townships respectively.

William Allen: Stating the petitioner to have resided in the Province for seven years past and has never drawn any land, prays for a town lot at York and such portion of land as to His Excellency shall seem proper. Ordered that he shall receive a town lot and 200 acres.

John Wilson, Junior: Praying for a town lot at York and such portion of land as His Excellency may think proper. Ordered that he do receive a town lot and four hundred acres.

John Johnston: Stating the petitioner to have resided 8 years in the Province with his wife and eight children. He has received 200 acres and prays for any further additional grant of land. Ordered that he do receive 200 acres.

Stephen Secord: Praying for family lands. Ordered that the same be granted.

Francis Weaver, an old soldier in Col. Butler's Rangers: Stating that he has a wife and five children. Prays that His Excellency will take his situation into consideration and grant him and his family the accustomed allowance to old soldiers and their families. Ordered a grant of 300 acres.

William Steel: Stating that he is a native of the Kingdom of Ireland, and strongly attached to the British Government, and praying for 1000 acres of land or such other quantity of land in the Township of Sugar Loaf East as Your Excellency shall seem proper. Ordered that he shall receive 200 acres in addition to the 200 already received.

Duncan McDougal: Stating that your petitioner was a merchant and in affluent circumstances, and possessed of the esteem and confidence of a numerous and extensive acquaintance; that your petitioner was warmly adhered to the British party, by which his property was almost exhausted. Your petitioner, with a numerous family, wishes to find an asylum in this Province, therefore prays His Excellency will take his case into consideration and grant him such allowance of the waste lands of the Crown as may seem meet. Ordered that the petitioner shall have a grant of twelve hundred acres; John McDougal, four hundred acres, and Nicholas McDougal, four hundred acres.

William Smith, late Gunner in His Majesty's Marine Department of this Province: Stating that your petitioner served as seaman on board His Majesty's navy upwards of four years, and served part of three years as gunner; that he married Eleanor, the daughter of Henry Young, a loyalist U.E., residing at the Bay of Quinté, and prays for lands for himself and likewise two hundred acres in behalf of his wife, and that he may locate them in the fourth township on the south side of the River Thames. Ordered four hundred acres for himself and two hundred for his wife.

Hannah Cummings: Stating your petitioner to be an English-woman, but resided during the American War in the Province of New York where she was ill-treated for her attachment to her native country; that she has been in the Province six years, and prays for 200 acres of land. Ordered a grant of 200 acres.

John Smith: Stating the petitioner, with many others, desirous to settle under the British Government, and praying for land. Ordered that John Smith have a grant of 200 acres only.

Joseph Springfield, late of Col. Butler's Rangers: Stating that he has as yet only received a back lot on the River Thames containing 200 acres; that he had some claims on a front lot near Chatham but finding that otherwise disposed of, he prays for lot No. 23 north side, in the rear of Coleman Roe, also a town lot in the Town of Chatham, where he means to build. Ordered that it be granted.

William Sutherland: Stating your petitioner's father to have fallen in the service of King and Country, and praying for such lands as is usually granted, your petitioner being desirous to settle in the Province. Ordered 200 acres near York, and referred to the Acting Surveyor General for location.

John George: Stating that he served during the American War in the late Rangers commanded by Lieut.-Col. Butler, and praying for 300 acres of land. Granted if he has not received any.

Andrew Ranciere: Stating that his late father served last war in Lieut.-Col. Butler's Rangers and drew only one hundred acres of his complement due to him for his services. Your petitioner has been nine years in the Province and married the daughter of a loyalist, and praying for 200 acres, his father's quota, 200 acres for himself, and 200 acres for his wife. Ordered that he shall have a grant of 200 acres for himself and 200 acres for Christina, the daughter of John Segar.

John Campbell: Stating that at the commencement of the American War he entered into the 76th Regt., and praying for a grant of land. Rejected.

Peter Bower: Stating that he served as a non-commissioned officer last war in Lieut.-Col. Butler's Rangers; that he has a wife, the daughter of a loyalist, and five children; that your petitioner was settled in the Bay of Quinté upon 400 acres of land which he has taken up as family lands; that your petitioner is now desirous of settling on lands in this district. Prays for the lands due to him for services, and the remaining 50 acres family lands may be assigned to him between Patterson's Creek and Long Point. Inadmissible. His remaining lands will be allotted in the district where he has received his original grant.

James Man: Praying for such portion of land as His Excellency shall think proper. Ordered that he shall have 200 acres.

Thomas Phillips: Certificate granted by the Land Board of Lincoln for a lot in that district. Ordered that it be transferred for lot No. 81 on the west side of Young Street.

3rd August, 1795.

At the Council Chamber, Newark.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables Peter Russell and AEneas Shaw.

Read the petition of William Davis: Stating the petitioner to have served during the late war and his property in Connecticut to have been confiscated. Praying for such quantity of the waste lands of the Crown as Your Excellency shall think proper. Inadmissible.

Brigade Major Littlehales, of Upper Canada: Memorial stating that in consequence of your memorialist's appointment in this Province and the great probability of its permanency, and in consideration of his residence in Upper Canada since the establishment of its Government, independent of twelve years antecedently devoted to the King's service, he prays Your Excellency will be pleased to grant him such a portion of the vacant lands of the Crown as to Your Excellency may seem proper, and your memorialist will ever most gratefully and most dutifully acknowledge the same. Ordered a grant of 1200 acres.

David and James Secord: Petition stating their father to have been a Lieutenant in the Indian Department who had received 500 acres and praying, as his heirs, for the residue of the land due to their father. Ordered that 1500 acres to make up the quantity of 2000 acres be granted to the heirs of James Secord.

Jeremiah Moore: Petition stating that in the year 1788 he applied to Col. Hunter and Mr. Hamilton, members of the Land Board, for a lot in the Township of Stamford, No. 61, on which he has built houses and barns and made other considerable improvements. Your petitioner has since discovered said lot to be part of the glebe lands of said township. Prays to be confirmed in the possession of the said lot No. 61 and allowed to give up to Government lot No. 88 adjoining the said glebe lands in lieu thereof, and which lot is much better timbered and of a richer soil. Ordered that the prayer of the petition be granted and referred to the Surveyor General.

Barnet Conolly: Petition stating that he has been three years in the Province and praying for land. Ordered a grant of 200 acres.

Albert Berdan: Petition stating the petitioner to have served as a Sergeant in the 2nd Battalion of New Jersey Volunteers and to have received 200 acres of land. Praying for the residue, and for the lands for his wife and seven children. Ordered that he do receive 300 acres in addition to the 200 acres received in Nova Scotia, and to apply for lands when his wife and children come into the Province.

Edin Bebee, a Sergeant in Lieut.-Col. Butler's late Corps of Rangers: Petition stating that he had improved 300 acres of land that had been granted him, and praying for the 200 acres due to him and for lands for his father and for his wife and children. Ordered that he do receive the residue of his lands and three hundred acres for his father.

John Van Eynen: Petition stating the petitioner to have received only a town lot and praying as a loyalist for lands. Ordered he do receive 200 acres.

Elizabeth Van Eynen: The wife of the late petitioner Van Eynen, and praying for lands as the daughter of a loyalist. Ordered a grant of 200 acres.

John Martin: Petition stating the petitioner to have been a firm loyalist during the late war, as appears by a certificate attached to his petition, and praying for 1200 acres of land. Ordered a grant of six hundred acres.

Robert Wilkins: Petition praying for 200 acres of land, lots Nos. 11 and 12 on the south side of the Carrying Place in the Bay of Quinté. Ordered one lot to be granted on the usual conditions, and referred to the Surveyor General for location.

Jonathan Austin: A soldier in Captain Barns Hatfield's company last war, and prays for land. Ordered that he do receive 200 acres.

John Martin, Detroit: Petition stating the petitioner to have resided in this Province for 22 years past. Ordered he do receive a grant of 1200 acres.

Joseph Moore: Petition stating your petitioner to be a native of this country and faithfully attached to the British Government, and praying for a grant of a lot of land about three miles up the second creek on the south side of the River Thames including the scite of cabins lately occupied by Chippawas and supposed to be in the Township of Tilbury and in the rear of lands granted to Abiah Park. Ordered the petition granted, and referred to the Surveyor General.

Thomas Butler, Lieut: Petition praying for family lands for his wife and four children. It does not appear that the petitioner has any right to family lands, but in consideration for his services two hundred and fifty acres in addition are granted to him for his wife and children.

William Baker, Lieut. in the Marine Department: Petition stating the petitioner to have served since the year 1773, and prays for such lands as his service and rank may entitle him to. Ordered that he receive lands with what he has received to make up three thousand acres.

Heirs of the late Capt. Walter Butler: Petition stating the petitioners never to have had the lands due to the said Walter Butler, and now pray for such lands due as he was entitled to. Rejected.

Captain Hazelton Spencer: Petition stating the petitioner to be the son of a member of the Board of Commissioners appointed to examine such persons as had returned to their allegiance; and who had died on his way to Canada after the capitulation of General Burgoyne. The petitioner presuming his father was entitled to lands, prays as his heir for what lands were due to him. Inadmissible.

Peter McMicken: Petition stating the petitioner to have served in Butler's Rangers the late war and, in consequence thereof, received the bounty of 300 acres, and praying for such further grant as His Excellency shall think proper and for family lands for a wife and six children. Ordered that he do receive 400 acres for his family and 200 acres for himself.

John Young, Sergeant in the late Corps of Butler's Rangers: Petition stating the petitioner to have received only 400 acres, presumes he is entitled to 100 acres more. Prays the same may be granted him and prays for 200 acres for his wife, the daughter of a loyalist, and a small addition thereto for his two children. Ordered that 100 acres be granted to himself and 200 acres to his wife and 100 acres for his children.

John Young, do do: Petition stating he had purchased the rights of several soldiers who had never taken up their lands, and praying to be confirmed in his purchase. Inadmissible.

Joseph L. Rowley: Petition stating the petitioner to be desirous to settle in this Province, and prays for such lands as the Council shall deem proper. Ordered he do receive a grant of 200 acres, and referred to the Surveyor General for location.

William Fleming, 1st Lieut. in the Marine Department on Lake Erie: Petition stating the petitioner had served 21 years, and praying for such lands as His Excellency may think proper. Ordered a grant of 1200 acres.

Captain Paxton: Petition stating that the petitioner had served His Majesty for 20 years in the Marine Department of Lake Ontario, and praying for a grant of such lands as His Excellency shall think proper. Ordered that he do receive a grant of 1200 acres.

John White, Esquire, Attorney General: Petition stating the petitioner to have received permission to locate 1200 acres in the County of Frontenac which he is desirous of relinquishing, and praying Your Excellency that the same number of acres may be granted to him in the Township of Scarborough. Granted.

John Gamble: Petition showing that your petitioner served as Hospital Mate during the late war and had never received any lands, praying for such quantity of lands as are usually granted to officers of his rank. Granted.

John Small, Clerk of the Council: Petition praying for such quantity of land as Your Excellency and the Council may please to grant. Ordered that 1200 acres be granted.

Daniel McIntier: Petition stating your petitioner had served His Majesty in the French War in the 78th Regt. of Foot, and was persecuted vigorously during the American War, and had his property confiscated. Praying for such lands as Your Excellency may think proper to grant him, and family lands for his wife and five children. Ordered that he do receive for himself a grant of 600 acres.

Thomas Wright, Surgeon, 1st Battalion 60th Regt. Foot: Petition stating that your petitioner served as Mate to the General Hospital in 1779 at New York, and to have served with Lord Cornwallis during the whole time His Lordship remained in North Carolina and that he had never taken up but 400 acres of land. Praying for the remaining quantity of land granted to officers of his rank. Granted.

James Richardson: Petition stating the petitioner to have served during the late American War in His Majesty's navy in the West Indies, and further for 4 years in the provincial navy upon Lake Ontario, and remained in the service until several years after the conclusion of the late war. Praying for such lands as Your Excellency in your wisdom may think proper. Ordered that he do receive a grant of 600 acres.

James Richardson, Master of the Kingston Pacquet: Petition stating that he built and navigated the aforesaid vessel and that he is desirous of building a wharf and storehouse in the Town of Kingston, that there is a vacant water lot No. 45, and prays for a grant of the same. Ordered to be referred to the Surveyor General.

Patrick Rice: Petition showing the petitioner to have served in His Majesty's service five years on Lake Champlain and afterwards three years on Lake Erie, and praying for a lot of land. Granted.

Richard B. Tickell, Esq: Petition praying as a settler for such lands as Your Excellency shall think proper. Ordered that he do receive a grant of 600 acres.

Alexander Campbell: Petition stating your petitioner to have joined the Royal Standard 1777 with such a number of men as entitled him to a Captain's commission. Was mustered, paid and served in that capacity during the whole campaign under the command of General Burgoyne and having drawn only a Subaltern's proportion, prays for one thousand acres of land in addition to what he now holds. Inadmissible.

George Galloway: Petition stating your petitioner to have drawn seven hundred acres as a Subaltern officer. Prays Your Excellency to grant him lands to put him on a footing with others of his rank. Not admissible, his rank not being ascertained.

James Brundige: Petition stating the petitioner to have been a firm loyalist during the late war and to have joined His Majesty's troops in 1777, and praying for land. Ordered he do receive 400 acres.

George Labar: Petition stating your petitioner to have arrived from Northampton County, Pennsylvania State, and wishes to settle with his family, a wife and eleven children, in this country to live under the British Government, and praying for a portion of land. Ordered that he shall have a grant of 400 acres, and that his sons, John aged 21, William aged 19, and George aged 16 years, do receive each a grant of 200 acres.

Nicholas Smith, an old Ranger: Petition stating that he served as a Fifer, having joined that corps in the year 1778. He married Catharine, the daughter of William May, by whom he has four children, and that he has located 200 acres of land himself. Praying for the usual allowance of land. Ordered that he do receive a grant of 200 acres for his wife. Not entitled to family lands.

Nicholas Klengenbrunner, a soldier in Col. Bryman's Grenadiers of Brunswickers: Petitions stating that he served 7 years in the said corps during the American War and was discharged at Sorrel in the year 1783. Prays for his portion of land at Toronto, or near the head of the lake. Ordered a grant of 200 acres for location to the Surveyor General.

James Clandenning, and three brothers: Petition stating that your petitioners' father, James Clandenning, was a soldier in Butler's Rangers and died after the war without having taken up his land, and praying the lands he would have been entitled to may be granted your petitioners. For consideration.

Jeremiah Moore, of Stamford: Petition stating that when he came into the Province in the year 1786 he brought eight children with him and his wife, that the annexed ticket for 3 and ½ lots was given him by order of the Land Board, which should have been for 5 and ½, of which the Hon. R. Hamilton is informed, that he has only received 200 acres in Stamford, and praying for an addition thereto, he having been a great sufferer during the American War on account of his attachment to Great Britain. Granted 500 acres in addition to the 200 he has received, which covers his claims on Frey's ticket and family lands. Referred to the Surveyor General for location.

Peter McBride, late a soldier in the 34th Regt: Petition stating that after his discharge from the said regiment, in which he served 18 years, he settled himself with his wife and 7 children in this Province; that he has received 400 acres of land as family lands and 100 acres part of His Majesty's bounty as a reduced soldier. Praying for the remaining 200 acres and any small addition thereto. Ordered a grant of 200 acres.

Captain William Mayne: Petition stating your petitioner to be a Captain-Lieut. in the Queen's Rangers and desirous of obtaining a small portion of land in the vicinity of York. Prays for lots Nos. 29 and 30 of the broken fronts A and B, Township of Scarborough. Ordered that it be granted.

Michael Phillips: Petition stating the petitioner to have purchased an improvement, No. 31, containing 200 acres, lying in the vacant land above Kingston, which he has much improved, which lot is entered on the map as school lot, and praying for the east side of the bay, together with the point which runs out in front where your petitioner's improvements lay. Ordered to be referred to the Surveyor General for enquiry.

4th August, 1795.

At the Council Chamber, Newark.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables Alexander Grant, Peter Russell and Æneas Shaw.

Lieut.-Col. Campbell, of His Majesty's 24th Regt: Petition stating that your petitioner was actively employed as an officer during the war in America in various parts of this continent; that at the termination of the unnatural rebellion waged against His Majesty, your petitioner was unfortunately reduced upon half pay as a Captain and in order to re-instate himself in his profession, was under the necessity of purchasing an exchange upon full pay, to the material diminution of his private fortune. From these and other circumstances in a series of unremitting attention in the discharge of his duty to his King and Country, and, he trusts, with zeal and honour, more especially from a recent occurrence not unknown to Your Excellency wherein your petitioner, in a most critical situation, had the good fortune to acquit himself to the approbation of his superiors, and, he has reason to flatter himself, even to the satisfaction of his Sovereign, therefore prays His Excellency will be pleased to grant him such a quantity of the vacant land of the Crown as he may think proper. Resolved that 1200 acres of land be granted to Lieut.-Col. Campbell, of His Majesty's 24th Regiment. Resolved that 800 acres additional be granted to Lieut.-Col. Campbell as a mark of the sense which this Council entertain of the importance of the services rendered to the Province by his late judicious conduct when in command of the post at the Miamis. Resolved that the Surveyor General be directed to assign the same.

Oliver Nugent, Esq: Petition stating that your petitioner in behalf of a family of six children, natural born subjects of Great Britain who intend to become inhabitants of the Province of Upper Canada and form distinct settlements for themselves under the protection and patronage of your petitioner, earnestly solicit an individual grant of 1200 acres of land, and they will as in duty bound ever pray. Signed for and in behalf of the said family, Oliver Nugent. The names of the children are Robert, an officer in His Majesty's 20th Regiment; Nicholas, John, Barbara, Mary and Christian. Resolved that the prayer of the petition be granted on the arrival of each of the within named family in the Province.

Oliver Nugent, Esq: Petition stating that your petitioner is a natural born subject of Great Britain and has had the honour of being engaged in some confidential situations under Government, that he is desirous of becoming an inhabitant of the Province of Upper Canada and forming an extensive settlement therein, having a number of persons actually engaged for that purpose and intending to embark forthwith for Europe to transport a large colony of peasants, artificers and others from thence, and prays he may have two townships. Resolved that a tract of land not exceeding 64,000 acres of land, including the reserves of the Crown and clergy, be reserved for Oliver Nugent, Esquire, and associates for the space of two years for settlers bona fide natives of Europe, agreeably to the prayer of the petition.

John Laughton, son of Captain Laughton, who for many years was commander of one of His Majesty's vessels on Lake Erie, prays for 1000 acres of land. Ordered he do receive a grant of 600 acres.

Joseph Edwards: Petition stating the petitioner to have resided many years in this Province and never to have drawn any lands, and praying for such quantity as the Council may grant him. Ordered he do receive a grant of 1200 acres, and referred to the Surveyor General for specification.

Daniel Howell: Petition stating the petitioner's father to have suffered severely during the late war, and that he expects his father with a numerous family, and prays for such grant of lands as the Council may think proper. Ordered that he do receive a grant of 200 acres.

Conrad Dorsheimer: Petition stating the petitioner to have been a settler in the Province for nine years. He has received but 100 acres of land and prays for any further grant of land, having a wife and four children. Ordered that he do receive a grant of 400 acres additional.

Christian Wilkie: Petition stating the petitioner to have lately arrived within this Province and praying for such quantity of lands as His Excellency shall think proper. Ordered a grant of 200 acres.

William Sheppard, George Leith and George Sharp, of Detroit, merchants: Petition stating that from the expected change of government therein and from their wish ever to be under the British Government and the losses they havesus tained by their attachment thereunto, pray the Council to grant them a township. Ordered that each of the petitioners do receive a grant of 1200 acres of land.

Thomas Forsyth, merchant, of Montreal: Petition praying for 1200 acres of land. Inadmissible, not being a resident in the Province.

John Richardson, Esq: Petition praying for a grant of twelve hundred acres of land. Inadmissible, not residing in the Province.

Alexander Ellice, Esq: Petition praying for 1200 acres of land. Inadmissible, not being a resident in the Province.

Captain England: Petition stating the petitioner to have served during the whole of the American War and has since resided in Upper Canada for three years, and prays for such grant of land as the Council shall think proper. Ordered that he do receive a grant of 1200 acres of land.

James Latham: Petition stating the petitioner to have been a Surgeon's Mate and Surgeon from the year 1756 to 1777, and praying for such grant of lands as his rank and services may entitle him to. Ordered he do receive a grant of 2000 acres.

Joseph Forsyth, of Kingston: Petition praying for such grant of land as Your Excellency may think proper. Ordered he do receive a grant of 1200 acres.

John French: Petition stating the petitioner to have arrived in this Province last fall and is anxious to be a settler. Prays for such lands as Your Excellency may please to grant him. Ordered he do receive a grant of 200 acres of land.

John Forsyth, of Montreal: Petition praying for 1200 acres of land. Inadmissible, not being resident in the Province.

Miner Bradt: Petition stating the petitioner to be a discharged soldier in Col. Butler's Regiment and praying for lands for himself, his wife, the daughter of a loyalist, and three children. Ordered 300 acres for himself, 200 acres for his wife, and 150 for his children.

George Forsyth: Petition praying for 1200 acres of land. Ordered that it be granted.

Charles Man: Petition stating that your petitioner has been in the Province 8 years and never drawn any lands. Praying for a lot in the Township of Beverly. Ordered that it be granted.

Solomon Moore: Petition stating that he came into the Province in 1788, that he has considerably improved lots Nos. 11 and 12 in the 11th concession of the Township of Pelham, and on lot No. 6 in the 8th concession, which latter he was in some measure forced to go to for water, that he has never received any lands unless the annexed ticket of Mr. Frey's, therefore prays to be confirmed in the above mentioned lots. Granted, and referred to the Surveyor.

12th August, 1795.

At the Council Chamber, Newark.

Present: The Honourables Peter Russell, Chairman of Committee of Council; Alexander Grant and Æneas Shaw.

Hon. Peter Russell: Petition praying that lot No. 9 in the second row of the Town of York (having persuaded Mr. Robinson to give up his claim) may be assigned to him as the terms with respect to building thereon have been completed, and that lot No. 7 in the first row may be also assgined to him for the purpose of building thereon. Granted.

Miss Elizabeth Russell: Petition for lot No. 10 in the second row. Granted.

Joshua Pell: Petition stating the petitioner to be desirous of having lots Nos. 14 and 15, second concession Sugar Loaf East, which are at present in dispute. Referred to the Surveyor General to report upon.

Jonathan Pell: Petition stating the petitioner to have been a Captain of militia in New York during the war and that the petitioner has never received any lands. Prays for 3000 acres. Further states that he received in Nova Scotia 1500 acres, but resigned them. Ordered a grant of five hundred acres.

Hon. Richard Cartwright: Petition stating the petitioner's father to have drawn 500 acres of land as a Subaltern officer and received a military pension till 1783. Prays for the additional quantity of land which His Majesty has been graciously pleased to order to persons drawing lands as Subaltern officers. Inadmissible unless his possession of a commission be duly authenticated.

Charles Burch: Petition stating the petitioner to have served in Colonel De Lancey's Corps at New York during the war; that he has been in this Province 8 years; has a wife and eleven children, and praying for such grant of land as His Excellency shall think proper. Ordered a grant of three hundred acres.

John McEuen: Petition stating the petitioner to have come into this Province in 1786 and received 300 acres of land, on which he has expended £1,600, and praying for an additional grant of land, having three sons. Ordered a grant of three hundred acres.

Hazelton Spencer, Esq: Petition stating your petitioner's father was a commissioner during the late troubles in America and received the pay of a Captain; that as Your Excellency's beneficence has in some few instances, as your petitioner has heard, been extended to the heirs of some respectable loyalists, petitioner asks as a matter of grace and favor that Your Excellency would be pleased to grant him such a quantity of land in respect to his father as in his widsom may see fit. Referred for His Excellency. Inadmissible.

Alexander Campbell, Esq: Petition stating the petitioner to have obtained a grant of land near the reserved land of the Crown and praying that the surveyor of the district may run a line separating his lots from those belonging to the Crown. Ordered to be run by the Surveyor General.

Thomas Colpitts: Petition stating the petitioner to have engaged with the persons who have obtained a grant of the Township of Murray; that he has sent on some settlers, and praying that the time for the settlement thereof may be enlarged. Inadmissible in as much as an advertisement in the American Minerva, published at New York May 11th, is in direct violation of the King's instructions as made public in the proclamation of Lieutenant Governor Simcoe at Quebec, and of every communication which has been held with Mr. Watson, Mr. Prior, or Mr. Colpitts on the subject, and the township may be deemed vacant and will be granted to other applicants.

John Coltman: Petition stating the petitioner to have been a Sergeant in Sir John Johnson's Corps; that he also served in His Majesty's navy and at the siege of Quebec; that he has received 200 acres of land and prays for such further grant as the Council shall think proper. Ordered 300 acres in addition to make up his Sergeant's proportion.

Benaiah Williams: Stating to have been nine years in the Province. He has a wife and three children and never drawn any lands owing to his having been employed in Mr. Burch's mills, and praying for lots Nos. 90 and 113 in the Township of Thorold. Ordered a grant of 400 acres of land and referred to the Surveyor General for the specification prayed for.

Samuel Adams: Petition stating the petitioner to have served His Majesty in different capacities and praying for land. Referred to His Excellency.

Jeremiah French, Esq: Petition stating the petitioner to have served as Lieutenant in the King's Royal Regiment of New York, and having drawn but 200 acres of land, prays for the residue due to him. Ordered eighteen hundred acres to complete his quantity as a Lieutenant.

Storts Overholt: Petition praying for lands for himself and family lands for his wife and six children. Granted provided it does not appear that he has received any.

Stephen Miller, Corporal in the Royal Regiment of New York: Petition stating the petitioner to have served His Majesty as a pilot to the loyalists and afterwards as a private in the Westchester refugees, and has been wounded several times and lost an arm. Prays for such grant of lands as his services may entitle him to, having never drawn any bounty lands. Ordered 400 acres of land in consideration of his wounds in addition to what he may already have received.

Timothy Johnson, Surgeon at Cornwall in the Eastern District: Praying for 1200 acres of land. Ordered a grant of 400 acres.

Capt. Peter Hare, of Butler's Rangers: Petitioner praying for his lands as Captain, having never drawn any but 200 acres which he has taken as family lands. Referred to the Surveyor General to know if any lands have been granted the petitioner as Captain.

Thomas Martin: Petition stating to have served in His Majesty's navy near five years, that he has been nine years in this country with his wife and six children, and has received 100 acres only, that he received Mr. Frey's ticket for 300 acres which he has lost. Prays for a grant of land and for the lands his family may be entitled to. Ordered a grant of 200 acres.

Hazelton Spencer, Esq: Attended and prayed the Council would be pleased to order the out lines of the Township of Haldimand to be surveyed. Ordered.

Philip Butler: Petition stating that he served as a seaman in the Marine Department and had received 200 acres of land, and praying for a further grant of 100 acres. Rejected.

John Cole: Petition stating the petitioner to have been in the Province nine years, and praying for 400 acres of land. Ordered a grant of 200 acres.

John Collins: Petition stating the petitioner to have settled on a lot of land on the River Thames which Mr. Allen has deprived him of, that he was a soldier in the 71st Regiment, and praying for the quantity of land to which he may be entitled to near the River Thames. Ordered a grant of 200 acres.

Abraham Deforest: Petition stating the petitioner to have served in Sir John Johnson's Royal Yorkers during the late American War, that he has received 200 acres of land, and praying for an additional grant. Ordered a grant of 100 acres in addition.

John Askin, Esq: Petition stating the petitioner to have been a firm loyalist and praying for such quantity of land as to the Council may seem proper. Ordered a grant of 1200 acres of land.

John Walterhouse: Petition stating the petitioner's wish to settle in this Province, and praying for a grant of land. Ordered a grant of 200 acres.

Jacob Bowman: Suffered most severely by his attachment to the British cause during the American War, and afterwards served in Col. Butler's Rangers, and prays for lands for himself, his wife and nine children, in addition to the 400 acres already received. Ordered that it be granted.

Henry Bowman, a private in Col. Butler's late Corps of Rangers: He is married, has a wife and three children, and has only drawn 100 acres of land. Prays for 200 acres in his own right and 200 in that of his family. Ordered that it be granted.

Abraham Bowman: Served in the Royal Regiment of New York, has been settled since the conclusion of the American War in this Province, has a wife, the daughter of a loyalist, and three children, and has drawn 300 acres of land. Prays for the residue that may be due to him. Ordered that it be granted with respect to his wife if she appears to be the daughter of a loyalist.

Alexander McTavish: Served His Majesty in the 74th Regiment as a private, and never having drawn any land, prays for 300 acres. Ordered that 200 acres be granted.

Francis Waddell: Petition states the petitioner to have drawn 200 acres of land and praying for an additional grant of 200 acres. Inadmissible.

Joseph Lutes: Has been long resident in this Province but never to have received any lands. Prays for an allotment. Ordered a grant of 200 acres.

Archibald Flaught: Petition stating the petitioner to have been a soldier in the Indian Department; that he has a family consisting of a wife and six children, and praying for such lands as he may thereby be entitled to. Ordered a grant of 400 acres.

Ross Lewin, Lieut. of the 5th Regt: Served His Majesty fifteen years but from his military prospects being blighted and having lost a hand, wishes to become a permanent settler in this Province and prays for 1200 acres of land. Ordered that it be granted on the terms of former grants to officers provided he becomes a bona fide settler in the Province.

John Philips: Served as a soldier in Sir John Johnson's Regiment, received 200 acres of land, and prays for the remaining 100 acres. Granted conditionally.

John Maracle: Was a Sergeant in Col. Butler's Rangers; married the daughter of a loyalist; has received but 150 acres of land, and prays for his own and family lands. Granted conditionally.

Major Shank: Praying for the remainder, or one thousand acres of his military lands in the Township of Murray and near the Carrying Place. Inadmissible in that township.

Bulah Millard, widow of Isaiah Millard: Has come into this Province in the year 1784; her husband located 200 acres of land; she has now living seven sons, and prays for a grant of land for her family. Ordered a grant of 300 acres for herself and five children brought with her into the Province.

Naomi Millard, widow of Jesse Millard who served in His Majesty's 84th Regiment: He located 100 acres of land. Prays that she may receive the remainder to complete the 300 acres her husband was entitled to and likewise 50 acres for herself. Ordered that it be granted.

Paul Arville: Wishes to become a settler, and prays for a grant of land. Ordered a grant of 200 acres.

G. A. Bowman, late of Butler's Rangers: Has a wife and nine children and has only drawn 200 acres of land. Prays for such further quantity of land as from the premises he may be entitled to. Ordered 100 acres in addition as a soldier, and five hundred acres for his wife and nine children.

William Lyons: Served in the 29th Regiment and 8th Regiment; has been a resident in this Province since 1783; has a wife and five children and has received 400 acres of land. Prays for family lands. Ordered a grant of 200 acres to make up his family lands he may be entitled to.

Christopher Culps: A firm loyalist, came into this Province after the late American War, has a wife and nine children. Prays for five hundred acres of land. The petitioner not entitled to family lands but in consideration of the largeness of his family, who are almost all daughters, ordered that he shall have a grant of 400 acres in addition.

William Johnston: Served His Majesty in the late war as Lieutenant in the Indian Department. Prays for the quantity usually allowed to Subaltern officers and to be granted to him at or near Long Point. Granted. For location referred to the Surveyor General.

Benjamin Crumb: Arrived in this Province in the year 1776, and after remaining some time in the Indian Department served 7 years in Butler's Rangers; has received 200 acres of land, has made great improvements; has a wife, the daughter of a loyalist, and three children. Prays to be confirmed in his improvements and for any further grant His Excellency may think proper. Ordered the prayer of the petition granted, and referred to the Surveyor General; and 100 acres to complete his military land, and 200 acres for his wife.

Samuel Thompson: Prays for a town lot at Newark. Granted on the usual conditions.

John Chaterton, late a soldier in Col. Delancey's Corps of Refugees: Took an early active part in the late rebellion in America, frequently at the hazard of his life; received at different times six wounds, one of which caused the loss of his left arm near the shoulder. Has never received any land and prays for a grant of 1000 acres in the Eastern District. Ordered a grant of 400 acres.

The Acting Surveyor General attended the Council, showing a sketch of the subdivision lines of the Township of Cornwall, with a report on a petition from certain inhabitants of the great inaccuracy of their lines being run and praying for relief. Resolved that a magistrate's certificate in future accompany all applications for family lands, certifying that the person so applying came into the Province before the year 1787 and specifying the number of the family.

14th August, 1795.

The Council Chamber, Newark.

The Council met. Present: The Honourables Peter Russell, Alexander Grant and Æneas Shaw.

Mr. Russell having informed the Board that one Harmer from the States, who calls himself a relation and partner with a Mr. Watson, the grantee (as he says) of the Township of Blenheim, came into this Province in May last and without presenting himself at the Surveyor's or Council office, or taking the Oath of Allegiance, has seated himself down in Watson's township and is building a mill thereon. The Board beg leave to recommend to Your Excellency that no person whatsoever be permitted to settle in this Province before he has taken the Oath of Allegiance and subscribed to the Declaration, and afterwards obtained an assignment from the Surveyor General or one of his deputies.

George Lawes, Junior: Has been employed seven years in this Province by the Engineers and Surveyors. Prays for such portion of land as the Council may think fit. Ordered a grant of 1200 acres.

James Donaldson, Sergeant in the 8th Regt. for 20 years: Prays for lot No. 11 on the north side, River Thames. Ordered to lie over.

David Burns, Esq: Claims to be entitled to 1000 acres of land, the residue of land due to him as serving as Surgeon in America last war. Prays for lots Nos. 16 and 15, second concession, west side of Yonge Street, and lots Nos. 12, 13 and 14, third concession, west side. The Committee are humbly of opinion that the officers and staff of all the regiments that served in America and were disbanded at the peace are entitled to partake of His Majesty's bounty with respect to lands, and as the same proportions which were granted to the 84th Regt. have been since extended by this Government to officers of other reduced corps, they recommend that the prayer of Mr. Burns be granted, if the lots petitioned for are vacant. Ordered to specify in what respect he is entitled to land for services during the late war. Inadmissible as a claim of right; the petition must be differently worded. Inadmissible as to location, actual settlers being wanted in that township.

James McClellan, a soldier in Lieut. Butler's Corps during the war: Received 200 acres of land. Prays for the residue due to him and for land for his family consisting of a wife and six children. Ordered that the same be granted as it appears by certificate he is entitled to family lands.

Peter Miller: Has been in this Province nearly 8 years, improved 50 acres held by ticket from Mr. Frey, lot No. 2, second concession 9th township. Prays to be confirmed therein; and for an additional grant. Ordered that it be granted if the Surveyor General sees no objection and 200 acres in addition to the 50 acres he possesses, which are to cover Mr. Frey's ticket and all other claims.

Antoine Chevalier de Neverville, 2nd Lieut. and Mate in the Marine Department on Lake Ontario: Served for four years and more as volunteer during the American War, on Lake Ontario and Lake Champlain, and now serving as 2nd Lieutenant on Lake Ontario. Prays for such lands as he may be entitled to. Referred to His Excellency.

John Uddle: Served five years in the 26th Regiment and praying for such lands as he may thereby be entitled to. Ordered a grant of 200 acres.

Conrad Hotherham: Says that he has built a dwelling house in the Township of Barton on No. 18, which has been assigned to one Bradt. Prays that he may be confirmed in the lot which he has improved. This petition to be heard again, and John Bradt to be ordered to attend on Tuesday.

Nathaniel Haynes: Served in Butler's Rangers, and received His Majesty's bounty of 300 acres of land. Prays for family lands for his wife and four children. The petitioner not entitled; having married and gotten children subsequent to his coming into the Province.

Jacob Moore: Received 200 acres of land; has a family, and prays for an additional grant. Granted when his son shall be of age.

Robert Pilkington, Esq: Claims to have made considerable improvements on lands which have been granted to him at or near Newark. Prays the Council to grant him a very few acres of wood land beyond the military line and adjoining to what has been granted to the Hon. Peter Russell. Inadmissible.

Joseph Haines, Jun: Is the son of a loyalist who came in during the war. Prays for land. Ordered a grant of 200 acres.

Elizabeth Stapleton, widow of the master carpenter of the Engineer Department: Prays for land for herself and family. This has been certified by the Commanding Engineer. Ordered a grant of 200 acres.

Joseph Clement, Lieutenant in the Six Nation Indian Department during the whole of the war with America, has located 1600 acres of land in the Township of Benbrook, as will appear by the map of the township. Prays to be confirmed therein. Ordered to be granted and referred to the Surveyor General.

Titus Doan: Came into this Province in 1787, with his wife and seven children. Has never drawn any land. Prays for land for himself and family. Ordered a grant of 400 acres as family lands, and 200 acres for himself if it does not appear by the Surveyor's books that he has received any.

Seymour and Hunter, merchants: Pray for a water lot at Kingston. Ordered to be granted and referred to the Surveyor General.

Archibald Fairchild: Prays for a water lot No. 24 in the Town of Kingston. Ordered to be referred to the Surveyor General.

Adrian Bradt: Has been a resident in this Province for ten years, has drawn only 100 acres of land, and prays for lands for himself and family. Ordered 100 acres in addition; not entitled to family lands.

Cornelius Pollock: Prays for lands for himself, having never drawn any, and for lands for his wife, the daughter of a loyalist. Ordered a grant of 200 acres.

Albert Haner, late a soldier in Butler's Rangers: Has received His Majesty's bounty of 300 acres, and prays for 450 acres more for his wife, a loyalist, and five children. Referred to His Excellency. Inadmissible.

John McGregor, merchant of Detroit: Prays for 1200 acres of land. Referred to the Surveyor General for enquiry whether he has any lands.

John Symington: Resident in this Province a great number of years. Prays for 1200 acres of land, having never drawn any. Ordered a grant of 1200 acres.

Lieutenant Edmund Henn, of the 24th Regiment: Served during the American War in the 37th Regiment, and praying for lands as a reduced officer. Inadmissible; unless he becomes a bona fide settler.

William Mills: A Captain of a merchant vessel on Lake Erie. Prays for some of the vacant lands of the Crown on the River Thames for the purpose of ship building. Ordered a grant of four hundred acres, and referred to the Surveyor General.

Robert McDougal: A reduced officer of the 8th Regt. Served also in the war of 1763, and prays for 3000 acres of land his father was entitled to. Rejected.

Thomas Little: Has been settled in the Province four years. Prays for lot No. 2 south side of the River Thames. Referred to the Surveyor General.

Elizabeth Hare: Her father was a Captain in His Majesty's service and was killed at Fort Stanwix in 1777. Prays for such portion of land as the Council shall think proper. Referred to His Excellency.

Angelique Andrews: Her father served as Commodore and was lost on Lake Ontario. Prays for 1200 acres of land. Ordered to be granted.

Francis Crooks, merchant at Newark: Prays for a portion of land. Ordered a grant of 1200 acres.

James Crooks, brother to Francis Crooks: Prays for land. Rejected.

William Crooks: Prays for land. Rejected.

Christopher Robinson, Esq: Prays for 1200 acres of land for his wife and four children. Ordered that it be granted.

James Clarke, Junior, Esq: Prays for a grant of land. Ordered a grant of 1200 acres.

Patrick Crookshanks, a discharged soldier of the artillery: Prays for land. Ordered 200 acres if he has never received any.

David Robertson, of Detroit: Prays for lot No. 7, front of the 2nd township north side of the River Thames. Ordered 200 acres if he has not received any lands, and referred to the Surveyor General.

Daniel Rose, Archibald Thompson, James Park and John Chisholm: State that they served many years in the American War without any emolument whatsoever. Pray for family lands for their wives and children. The truth of this petition is certified by Col. Butler and Major McDonell. The Committee having revised this petition and taken into consideration the services and families of the petitioners, recommend to Your Excellency to grant to each of them 300 acres in addition to the lands they may have received. Ordered that it be granted.

James Fleet: Served during the last war for the space of nine years. The last ten years of his life have been occupied in the King's service on the Upper Lakes. Prays for 2000 acres of land. Referred to His Excellency.

Walter Roe, Esq., Clerk of Peace for the Western District: Served His Majesty as a midshipman in the Royal Navy from 1779 to the conclusion of the war, since which time he has been resident in this and the Lower Province. Prays for 2000 acres of land on the River Thames, and a town lot in the reserve at Chatham. Ordered a town lot.

The following petitions for town lots in Newark were read:

Samuel Thompson, John Clement, Causon Chorus, No. 367; Joseph Clement, John Sweep, No. 310; Samuel Leach, No. 162; Arnold Haughman, No. 223; Jacob Ball, No. 360; John Ball, No. 334; George Ball, No. 359; Peter

Ball, No. 358; Joshua Hunt, No. 224; John McEwen, No. 224; Jeremiah Donivan No. 181; Jacob Ball, Junior, No. 335; John Brooks, No. 97; Adam Hutt, No. 336; Isabella Ford, No. 239; Peter Bradt, No. 242; Seymore Lake, No. 208; Jacob Ball, Junior, No. 333; Thomas Lake, No. 161; James Clement and Lieut. A. Butler, No. 337.

Ordered that these petitions be granted on the usual conditions, and be referred to the Surveyor General.

John McGill and Benjamin Canby: At a very great expense erected a grist and saw mill near the Chippawa, and finding that the 21 years' lease allowed them will not be time sufficient to indemnify them, pray for a grant of the fee simple of their tenure, or a lease of ninety-nine years. Granted, and referred to the Attorney General for the mode of conveyance.

18th August, 1795.

Council Chamber, Newark.

Committee of Council. Present: The Honourables Peter Russell, Chairman; Alexander Grant and Æneas Shaw.

Miss Elizabeth Russell: Accompanied by her brother, the Receiver General of this Province, in 1792, and being desirous of becoming a permanent settler, requests His Excellency to grant her 1200 acres of the waste lands of the Crown which she conceives herself to be in a capacity of improving to the benefit of the colony and His Majesty's service. Ordered that it be granted.

Donell McDonell, merchant of Kingston: Has been long resident in this Province; prays for 1200 acres of land, and as a part of it, for a certain tract to which he purchased an officer's right, near Kingston. Ordered that the prayer of the petition be granted and referred to the Surveyor General for the specification prayed for.

William Dunbar: Bought of John Gardner lot No. 1 in the Township of Fort Erie, a favourable spot for a mill; was at great expense in cutting through a solid rock to supply the mill with water; the unexpected decrease of the lake water soon deprived him of his labours and left him so involved in debt that his creditors took from him the farm, but in consideration of his great labour and expense, left him the mill and scite which he now humbly prays His Excellency to confirm to him independent of the lot No. 1. Recommended to His Excellency to grant the prayer of the petition so far as related to the mill and scite.

John Gardner: Received a grant of 200 acres of land and prays for a further grant, and for family lands for his wife and five children. Ordered that he shall have a grant of 400 acres, being 350 for family lands and 50 acres in addition to the 200 he has received. Referred to the Surveyor General who is to be directed to take care that the broken fronts of the lots assigned to Gardner do not interfere with the mill built and occupied by William Dunbar.

Alexis Maisonville: Purchased an isle called Isle aux Peches, and prays he may receive a grant of the same. The Committee cannot recommend this, but refers it to the Receiver General for a lease.

Allen McNabb, Lieut. of the late Queen's Rangers: States that his wife's father was a Captain of the Port of Quebec, and is desirous in right of his wife of locating in this Province such lands as are allowed to Provincial Captains. The Committee cannot recommend the prayer of this petition.

Richard Springer, a soldier in Butler's Corps: Received 300 acres of land as a disbanded Ranger. Prays for lands for his wife, the daughter of a loyalist

(U.E.) and four children. Ordered a grant of 200 for his wife, but not entitled to family lands, his children being young.

John Claus: A Corporal in Butler's Rangers; suffered by his attachment to the British cause; received 300 acres; and prays for lands for his wife, the daughter of a loyalist. Ordered that he shall have 200 acres in addition, and 200 acres for his wife.

Peter Benville: Served in the Marine Department; received 200 acres as appears by certificate. Prays Council to allow him to locate them in some other place, and to transfer the assignment before the grant is made out. Inadmissible.

Jacob Moore: Received 200 acres of land, at a considerable distance from each other, in separate lots on which he had made great improvements. Prays for 200 acres in addition. Ordered that the prayer of the petition be granted.

Frederick Burger, a discharged soldier of the 34th Regiment: Prays for a grant of land, having never received but a few acres on which he has made improvements. Ordered a grant of 200 acres including his improvements. Referred to the Surveyor General.

Thomas Millard, Senior, miller: Received 200 acres of land; has been a settler in the Province since 1777; prays for a further grant. Ordered 200 acres in addition in consideration of his being so long resident in the Province.

Daniel Millard, Esq., J.P.: Married the daughter of a loyalist. Prays for a grant of land for himself, his wife and five children; having received but 200 acres. Ordered that the petitioner shall have a grant of six hundred acres for himself and 200 acres for his wife.

John Gustin: Settled in the Province eight years; has only located 160 acres of land and, having a wife and five children, prays for a further grant. Ordered that the petitioner shall have 200 acres in addition and 200 acres as family lands, he having brought a wife and children into the Province.

Robert Couchlin, late of Butler's Rangers: Received 200 acres and prays for the residue. Ordered 100 acres in addition.

Arnold Hagarman: Served with the Hessian troops in British pay, was captured with the army under General Burgoyne. Afterwards was a non-commissioned officer in Butler's Rangers. He married the daughter of a loyalist and has taken up only 100 acres, and prays for the four hundred acres due to him and two hundred for his wife and children. Ordered a grant of 400 acres to make up the quantity he is entitled to as a Sergeant provided he produces a certificate of his being one. Referred to the Surveyor General to report if he has received more lands than he states.

Isaack Volick: Served as a private in Butler's Rangers; has located 300 acres of land, and prays for land for ten children which he brought into this Province. Ordered a grant of 500 acres as family lands.

James Meddaugh: Served in the American War with Captain Brant, and from having been employed on his father's farm has never received any grant of land for himself. He now prays for land. Ordered a grant of 400 acres.

Richard Slingerland: Served in Butler's Rangers, has drawn 200 acres of land, and prays for family lands for his wife, the daughter of a loyalist. Ordered 100 acres to complete his military land; his wife does not come under the description of a loyalist.

James Crawford, a discharged soldier of Butler's Rangers: Has received 200 acres of land, and prays for the residue. Ordered 100 acres to complete his military lands, and referred to the Surveyor General.

Elizabeth Darling: Has four children by a former husband, who left them most distressed. Prays for a grant of land for their support. Ordered a grant of 200 acres.

Elijah Doan: Settled on 200 acres previous to the lines being run out, which he now finds to be in four different lots. Prays to have these lots confirmed to him. Ordered the prayer of the petition granted, provided it does not interfere with any other right, and referred to the Surveyor General.

John Flaught: Received 200 acres, and prays as a loyalist for a further grant. Inadmissible.

Jacob Bessey, a private in Butler's Rangers: Has received 200 acres, and prays for the residue. Ordered 100 acres to complete his military land.

Robert Brooks: Has been nine years in the Province, has settled, by virtue of a Land Board order, on lots Nos. 163, 164 and 165 in the Township of Stamford, and prays to be confirmed in these lots. Ordered to be granted, and referred to the Surveyor General.

17th August, 1795.

At the Council Chamber, Newark.

Committee of Council. Present: The Honourables Peter Russell, Alexander Grant and Æneas Shaw.

Alexander McKee, Esq: Is desirous of obtaining for himself and his friends town lots in the Town of Chatham, and prays for eight lots to be granted to the under mentioned persons:

Colonel McKee, 1 lot; Thomas Duggan, 1 lot; Lieut. Thos. McKee, 1 lot; George Ironside, 1 lot; Capt. Mathew Elliott, 1 lot; Ranauld McDonall, 1 lot; Prideaux Selby, 1 lot; and Thomas Alexander Clarke, 1 lot. Ordered that the prayer of the petition be granted.

Prideaux Selby: Has had an appointment conferred on him which enables him to become a permanent settler in this Province. Prays for 1200 acres of land, or such portion as the Council shall seem proper to be granted him. Ordered a grant of 1200 acres.

Jacob Ball, Sen., a Lieut. in Butler's Rangers: Has received 600 acres of land in the Township of Grantham and 200 acres on the Four and Three Mile Creeks in the Township of Newark. Prays for the remaining 1200 acres which may be due to him as Lieutenant; also, that never having applied for any land for his wife and family, he humbly prays that a small addition for family lands may be allowed him. Ordered that 1200 acres be granted to complete his military lands, and his family lands for his wife and six children. Referred to the Surveyor General.

Jacob Ball, Jun., son of the former petitioner: Has received 150 acres of land in the Township of Thorold, whereon he lives, which he has considerably improved. He has a wife, the daughter of a loyalist (U.E.) and five children, and prays for family lands and for a small addition for himself. Ordered that 500 acres in addition be granted, of which 200 acres are to be considered in right of his wife.

George Young: Has resided in this Province and Newfoundland since 1774. Served under Colonel Pringle of the Engineers, and in many other military capacities; adduces certificates of character. Prays for a grant of land, having a wife and five children. Ordered a grant of six hundred acres.

Peter Tenbrook: Served as Captain in Butler's Rangers; has located but a small quantity of land; and prays that the residue due to him may be granted, as a part of which he prays for certain specific lots already inserted for him in the Surveyor General's office. Ordered a grant for the balance of lands due to him as Captain. Referred to the Surveyor General.

Jacob Tenbrook, son of the former petitioner: Prays for 1200 acres of land. Ordered to be granted.

The Rev. Mr. Addison: Prays the Council to grant him a certain spot of land the property of one Snow, now deceased, and in consideration thereof will administer the estate of the said Snow. The Committee does not conceive that the prayer of this petition comes within their Province.

Isaac Vrooman: Has taken possession of lot No. 9 on the Chippawa River and has expended nearly thirty pounds thereon, but another person now claims it. He prays to be confirmed in this lot which he has improved. Ordered to be referred to the Surveyor General to report by what authority the disputants have possessed the land prayed for.

David Sutherland: Served as a Lieutenant in Butler's Rangers, and prays for land as a reduced officer. Ordered to lie over to Wednesday.

William Jarvis, Esq., Edward Jessup and Edward Jessup, Jun: Pray to settle the Township of Cambridge, and to have the remainder of the township confirmed to them after the following persons shall have received the proportion of land due to them as reduced military officers: Edward Jessup, 4000 acres; Edward Jessup, Jun., 1400 acres; Archibald Thompson, 2000 acres; and Alexander Fraser, 2000 acres. The Committee cannot recommend the prayer of this petition.

John Backhouse: Received an Order of Council for 600 acres of land, and prays to locate them on Long Point. Ordered that the prayer of this petition be granted.

John Muirhead: Resides with Hon. Mr. Hamilton of Queenstown, and wishes in the course of time to become a settler in this Province. Prays for lands. Inadmissible.

David McFall: In behalf of his two orphan nieces whose father was killed in the King's service at New York, prays for a grant of 500 acres. Ordered that the two nieces, Ally and Mary McFall, have 200 acres each.

Major John McDonell: Prays for two townships. The Committee cannot recommend the prayer of this petition.

Major John McDonell: States that his father was entitled to a residue of 2000 acres as a reduced officer in Sir John Johnson's Regiment, and prays that as his heir he may receive the same. Ordered that whatever quantity of land may appear to be due to Captain Alexander McDonell of the King's late Royal Regiment of New York, that quantity may be granted. Referred to the Surveyor General.

Captain John McDonell: A reduced Captain of Butler's Rangers, prays for the residue of lands due to him. Ordered that the quantity of lands due to the petitioner as a Captain be granted. Referred to the Surveyor General to be located in the Eastern District.

John Cane: Possessed of lot No. 25 in the Township of Newark, which was formerly granted to the late James Fitzgerald, the certificate of which was lost with him when drowned. Prays the Council to order the petition to be confirmed. Ordered to be granted; and referred to the Surveyor General.

Cornelius Van Alstine: States he has never received any land, and prays that the rear part of lots Nos. 15 and 16, fifth concession of Adolphus Town, may be granted to him as the certificates originally given for them have been returned to the Deputy Surveyor General's office at Quebec unassigned. Ordered to be referred to the Surveyor General to report upon.

Elianor Rose: States that she is the mother of seven children and wife of Daniel Rose, who served in Jessup's Corps during the American War, the daughter of Alexander Campbell, a loyalist (U.E.) and praying for 200 acres of land. Granted and referred to the Surveyor General.

John McKay, merchant of Newark: Has received 200 acres of land at York which he has improved, and prays for a further grant. Ordered a grant of one thousand acres in addition to the 200 he has received. Referred to the Surveyor General.

John Hayner, a private soldier in Butler's Regiment: Has received 300 acres but never any family lands. Ordered that family land for his wife and four children be granted to him.

Christian Bradt: Received 100 acres, and prays for family lands for his wife and five children. Ordered 100 acres in addition, and when he produces the requisite certificate of his wife being the daughter of a loyalist, 200 acres more for her.

Allen McDonell, a Sergeant in Butler's Regiment: Received 400 acres of land. Prays for the residue of land due to him. Further states that he is settled on Patterson's Creek, and prays to be confirmed thereon, and also for family lands. Ordered a grant of 100 acres to complete his military lands, and 150 acres as family lands for a wife and two children. Referred to the Surveyor General for the assignment he prays for.

John May: States that his father served seven years in Butler's Rangers. Prays for 200 acres. Ordered the prayer of this petition be granted.

Peter May: Has received 150 acres of land, has a wife and three sons. His wife's father served in Butler's Rangers. Prays for 400 acres. Ordered 100 acres for himself. He must bring proofs of his wife being entitled.

Ronald McDonell: Has been many years resident in this Province and often served as a volunteer during the continuance of the war under Col. McKee, by whom he is recommended. Prays for 1200 acres of land. The Committee is not sufficiently acquainted with the petitioner's merits to recommend the prayer of this petition.

Richard Hatt: Is engaged in mercantile business with Mr. McKay, and prays for a grant of land, having never received any. Ordered the petitioner to be granted 400 acres of land.

William Mills, master of a merchant vessel: Prays for a town lot at Chatham. Ordered to be granted.

Charles Depue, a soldier in late Col. Butler's Rangers: Prays for 100 acres to complete the quantity he is entitled to as a soldier and 200 acres for his wife, the daughter of a loyalist, entitled to His Majesty's bounty; also for family lands having a wife and five children. Ordered that the prayer of this petition be granted in all its parts except for family lands, as he was married and his children have been born since his residence in this Province.

Read another petition of Charles Depue: Stating that to relieve the distresses of his father he bought from him, under the sanction and with the consent of the Land Board, lots No. 5 in the 1st, 2nd and 3rd concession, and No. 4 in the 4th concession of the Township of Barton, for which he paid to Hon. R. Hamilton a debt of his father's of two hundred pounds York currency, and paid into his father's hands one hundred and eighty-six pounds York currency more, as appears by documents annexed to the transfers authorized by the Land Board said to be with the Attorney General. Prays said lands may be secured to him by a grant under deed in his own name, to guard against the evil design of his father who, by the counsel of ill-advisers, is endeavouring to oust him from said lands. Ordered that the Attorney General be directed to take such measures as may secure the petitioner in the tenure of the lands he prays for.

Coleman Roe: Has been in the naval service a number of years, has made an improvement on lot No. 23, first township north side the River Thames, prior to the survey; has since been at a considerable expense improving the same; and prays that it may be confirmed to him. Ordered to be referred to the Deputy Surveyor General.

Richard Pollard, Esq., Detroit: States that on his arrival in Canada in the spring of '75, he immediately took up arms to repel an invasion; that he served the office of Sheriff, Returning Officer, and Postmaster, of the Western District without a salary since '82. Prays for one thousand acres of land on the River Thames, 5th township, lots Nos. 11 to 15. Ordered to be granted, and referred to the Surveyor General.

JOHN SMALL, C.E.C.

19th August, 1795.

At the Council Chamber, Newark.

John Baptiste Bouchette, Senior Naval Officer on Lake Ontario: States that he has received 1200 acres of land, and prays that the same quantity may be granted to him as the late Commodore Beeton, there being but one day's difference in their commission. Ordered the petitioner 1800 acres to complete 3000 acres, being the quantity the Committee judge him entitled to.

Captain James McDonell, in Sir John Johnson's Regt: Prays (as heir-at-law to his deceased brother, Captain John McDonell) for 3000 acres of land to which his brother was entitled. The Committee cannot recommend the prayer of this petition which, if granted, would equally entitle the heirs of those officers killed at Bunker's Hill to grants of land.

Elizabeth Van Every: The widow of a Lieutenant in Butler's Rangers, who was killed in 1781, and who left one child. She has never drawn any lands for herself or in right of her late husband; prays for such quantity as the Council shall seem meet. The Committee cannot recommend to its full extent, for the reasons given in the report on Captain James McDonell's petition, but in consideration of the circumstances stated, orders that 1200 acres be granted for the support of the petitioner and her son.

Adam Vrooman, Sergeant in Col. Butler's Corps: States that he is heir to his brother, who was also a Sergeant in the same corps; prays for the residue of land for himself and for the land his brother was entitled to. The Committee cannot recommend the prayer of this petition, the petitioner having already received the land due to him as Sergeant.

James Wilson: States that he has drawn 450 acres of land on which he has made considerable improvements, and prays for a further grant of land to make up 1200 acres. The Committee cannot recommend the prayer of this petition.

Peter Thompson: Received 200 acres as a discharged soldier of Butler's Rangers, has been settled since the reduction of that corps, with his wife, in this Province; and prays for land. Ordered that one hundred acres be granted in addition, to complete his military land; and also 200 acres in addition, as being an old settler. Referred to the Surveyor General.

Edward Wright, Quarter-master of the Queen's Rangers: Prays for a town lot at Newark. Ordered to be granted on the usual conditions.

Lewis Maybe, a Sergeant in Butler's Rangers: Has drawn 200 acres of land, and prays for the remaining 300 acres; also lands for his son. Ordered a grant of 300 acres to complete his military lands. (Confirmed to him 18th December, 1805). If his son has anything to ask, he must come forward in his own person.

Hannah McCarty, a widow: Prays for lands to support herself and six children. The petitioner to bring a magistrate's certificate in support of her prayer.

David Van Every, a Sergeant in Butler's Rangers: Received 200 acres of land; prays for the remaining 300 acres to complete his bounty. He has a wife, the daughter of parents who were in the lines during the war, and seven children. Prays for family lands. Ordered 300 acres to complete his military lands; 200 acres for his wife, the daughter of a loyalist; and 100 acres for his two children born before 1783.

Charles Green: Has been in the Province since 1786; received 200 acres; prays for family lands, having a wife and 5 children. The petitioner is not entitled to family lands but in consideration of the largeness of his family, ordered 200 acres in addition.

Crispus Strowbridge: Received a ticket from Mr. Frey for five lots and a half and afterwards for 100 acres, but the Land Board having declined to confirm the ticket, he prays to be confirmed therein. Has a wife and 12 children, nine of whom are at present with him. Ordered two hundred for himself, and five hundred for his wife and nine children.

Hart Smith, a soldier in Barton's Corps: States that he has received 200 acres, and has a wife and five children, four of which came in before 1787. Prays for a further grant and for family lands. Ordered a grant of 200 acres in addition.

Mathew Buggener: States that he has suffered most severely by his loyalty. Has been in the Province since 1786, has a wife and ten children; and never received but 250 acres. Ordered a grant of 550 acres for family lands on his producing the required certificate.

William Pew: Settled upwards of eight years. Received 200 acres of land only, in the Township of Stamford; has a wife and four children, and prays for a further grant. Ordered 100 acres for his wife and one child brought with him into the Province on his producing the required certificate.

George Adams: Has been resident in the Province some time and now carries on a considerable tannery. Has never taken up any land. Prays for a grant. Ordered a grant of 400 acres.

John Aber: Served His Majesty in the last war, and has been in this Province. Prays for a grant of land having never received any. Ordered a grant of 300 acres.

Martin Everit: Received and improved 200 acres of land which were sold to discharge his debts. By a number of misfortunes is reduced, and prays for a grant of 400 acres to enable him to support his wife and children. Ordered 400 acres be granted which covers all claims for family lands and former tickets.

Andrew Jones, and others as heirs and in behalf of the late James Jones of Butler's Rangers who received 300 acres for himself and 100 acres for his family lands; prays for the residue due to his father who brought into this Province a wife and 8 children. Ordered a grant of three hundred acres to complete the family lands his father was entitled to, on producing the requisite certificate.

David Kemp: Came to the Province immediately after the Peace; brought a wife and eleven children with him; he now prays for lands, having as yet never taken up any. Ordered 200 acres for himself and 500 acres for family lands, and referred to the Surveyor General.

James Mathews: States that he has served His Majesty in the first regiment of Jersey Volunteers. Has a wife and four children; has never received but 400 acres. Prays for residue. Ordered 100 acres to complete his military lands, and 100 acres for family lands on producing certificates.

Deborah Freel, widow: States that her father and brother were in His Majesty's service, and she prays that her children may receive the land due to them on their father's and uncle's account, and also for herself, who had been within the British lines during the war. Ordered a grant of 200 acres. The claims for the deceased, inadmissible. (Read again 13th March, 1797.)

Andrew Butler, late a Lieut. in Butler's Regt: Located lots Nos. 167, 168 and 169, and prays for assignments thereof under the Acting Surveyor General. Ordered to be granted and referred to the Surveyor General to comply with the prayer of the petition, if there be no objection.

Andrew Bradt, late a Captain in Lieut.-Col. Butler's Regt: Has received 800 acres, and prays for the residue. Ordered to be granted and referred to the Surveyor General.

John Chisholm: Purchased a soldier's right, and prays for a grant thereof. The Committee cannot recommend the prayer of this petition.

James O'Conoly: Received 300 acres of land, and prays for a further quantity. The petitioner has received the quantity he is entitled to.

Thomas McMichan: Served in the Indian Department under Col. Guy Johnston during the late war, and has since the Peace been resident in this Province upon 200 acres of land, which he has considerably improved, and, having a wife and two children, prays for a further grant. Ordered 200 acres in addition.

Richard Hainer: Served as a private in Butler's Regiment; married the daughter of Isaac Flock, a loyalist; has six children, and never applied for family lands. Ordered a grant of 200 acres for his wife. It does not appear that he is entitled to family lands.

Captain Salmon: States that he has made an improvement in this Province. Prays for 1200 acres of land. Ordered that it be granted.

20th August, 1795.

At the Council Chamber, Newark.

Committee of Council: Present: The Honourables Peter Russell, Alexander Grant, and Æneas Shaw.

Lewis Barth: Served during the late war as Master and Mate on Lakes Erie and Huron. Prays for land having never received any. Ordered 1200 acres, being strongly recommended by Hon. Alexander Grant.

Lieut. John Clement: States that as yet he has only drawn such quantity of lands as are due to him for his family's account, and praying for 2000 acres. Ordered the quantity of land which may appear to be due to the petitioner as a Lieutenant in the Indian Department.

Adam Bowman: Received 300 acres as a reduced Ranger and prays for a further grant in consideration of his wounds and sufferings. Ordered 200 acres in consideration of his wounds and sufferings.

Christopher Beamer: Received 200 acres of land, and prays for a further grant. The Committee cannot recommend the prayer of this petition.

Jacob Vrooman: Has lately come into the Province, and prays for 200 acres of land. Ordered 200 acres when he has taken the oaths and referred to the Surveyor General.

James Henry, an old Ranger: Has located only 200 acres of land, 100 of which are in good fence and tillage, and prays a further grant. Ordered 200 acres in addition to support his family.

William Fearen: A discharged sailor of the Marine Department of this Province, prays for 300 acres. Ordered a grant of 200 acres.

Edmund Frost: Served during the late war as Corporal in Major Jessup's Corps and has located 300 acres of land. Prays for an additional grant of 200 acres. Ordered 100 acres in addition when he produces his discharge as a Corporal. (Produced his discharge 7th October, 1796.)

John Frazer, of Ernest Town: Was in His Majesty's service from 1775, till the conclusion of the war and located 200 acres of land. Prays for an additional grant of 500 acres. Ordered 300 acres.

Colin McNabb, Superintendent of the Inland Navigation at the Port of Niagara: Petitioned the Council some time since for his own lands as a reduced officer, and for family lands, and prays the resolve of the Council may be revised. Ordered 300 acres to complete the former Order of Council for family lands.

Ensign Johnson Butler: Served during the late war in the 102nd Regiment and conceives himself entitled to 2000 acres of land. Prays for that quantity. Ordered that the prayer of the petition be granted, and referred to the Surveyor General.

James Russell: Served His Majesty in different capacities, and prays for lands. Ordered 200 acres.

Bathsheba and John Soper: Received from the Land Board an assignment for four hundred acres in the Midland District. Pray that they may locate that quantity in this district. Ordered the prayer of the petition be granted, and referred to the Surveyor General.

John Van Voist: Wishes to settle in the Province and prays for an allotment of land for himself and family. Ordered 200 acres.

James Brown: Served seven years as a Sergeant in Col. De Lancey's and and has been eight years in the Province. Prays for permission to locate 500 acres of land at Long Point. Ordered that the prayer of this petition be granted.

Lawrence Herkermer: Purchased from Mr. Peter Smith, in the Township of Hope, the house and goods, and to have improved the lands around it, but has been dispossessed by Mr. Walton, the patentee of the said township. Prays he may be confirmed in the lots he has purchased and improved. Ordered that the prayer of the petition be granted if the petitioner has a legal transfer of the premises from Mr. Peter Smith.

Sergeant Thomas Hill, Queen's Rangers: Served in America last war for ten years. Prays for the quantity of land usually granted to reduced Sergeants. Ordered 500 acres when he is discharged from the Queen's Rangers and becomes a settler.

Justus Allin: Has been in the Province two years, and prays for an allotment of land. Ordered 200 acres and referred to the Surveyor General.

Aaron Doan: A settler in the Province seven years, settled on 80 acres of land on No. 15 and on No. 16, and prays for 400 acres of land within the Township of Humberstone, including the 80 acres of Nos. 15 and 16. Ordered 300 acres including what may have been already granted, and referred to the Surveyor General.

James Clandenning: Has been in the Province four years and prays for a grant of land. Ordered 200 acres on his producing certificate of his having taken the oaths, and referred to the Surveyor General.

John Jones, Sergeant in the 60th Regt: Has never located any lands; prays for 500 acres, and family lands for his wife, her mother, and one child. The two former came into this Province in 1778. Ordered 300 acres, it not appearing to the Committee that the petitioner is entitled to a Sergeant's proportion.

John Reilly, of Stamford, late Surgeon in Col. Butler's Rangers: Has a wife and nine children; has received only 200 acres whereon he lives; his wife is the daughter of a loyalist, and has not received her land. Prays for such portion for himself and family as His Excellency may seem meet. The petitioner must produce the requisite certificates.

Anna Hazen: Widow of a Corporal who died of the wounds received in His Majesty's service, prays for a grant of land to support her six children The Committee cannot recommend the prayer of this petition.

George Woodby: Served 7 years in De Lancey's Corps. Prays for a grant of 300 acres, and lands for his wife and five children. Ordered a grant of 400 acres and referred to the Surveyor General.

Robert Munro: Has received 200 acres and prays for an additional grant. The Committee cannot recommend the prayer of this petition.

Lieutenant Cowall, Queen's Rangers: Served as Lieutenant in the 99th Regiment and prays for the lands usually granted to reduced officers of his rank. Ordered that the prayer of this petition be granted if the petitioner settles in the Province.

Resolved that the grants of land to reduced officers are upon the condition of their becoming bona fide settlers in the Province.

Ordered that a letter be written to John McDonell, Esq., Speaker of the Assembly, to attend at the Council Chamber to-morrow and to bring with him an estimate of the loan he wishes to borrow.

Adam Haines: Came into the Province in the year 1785; has received 200 acres of land; has a wife and seven children; and prays for family lands. Ordered that the requisite certificates must be produced.

21st August, 1795.

At the Council Chamber, Newark.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables Alexander Grant, Peter Russell and Æneas Shaw.

The Speaker of the House of Assembly attended, from the order of yesterday, with the estimate which His Excellency ordered to be laid before the Council, as follows:

ESTIMATE OF THE DEBTS IMMEDIATELY PAYABLE BY THE TWO HOUSES OF LEGISLATURE

	£	s.	d.
Officers of the Honourable the Legislative Council:			
To the Clerk for two years of his salary	191	5	0
To the Chaplain for one year's salary, having been struck off afterwards for non-attendance by the Honourable Mr. Chief Justice Osgoode	25	0	0
To the Gentleman Usher of the Black Rod, for three years of his salary	135	0	0
To the Doorkeeper, three years of his salary	30	0	0

Officers of the Assembly:	£.	s.	d.
To the Clerk, for two years of his salary	191	5	0
To the Chaplain for two years of his salary	50	0	0
To the Sergeant at Arms do do	95	0	0
To the Doorkeeper do do	20	0	0
To the Speaker for one year's salary	200	0	0
To contingent expenses, stationery, etc., for both Houses	140	0	0
To loan to the Adjutant General of Militia	91	5	0
	£1,168	15	0

(Signed) J. McDonell,
Speaker of the Assembly.

Resolved that the Receiver General be directed to issue a sum not exceeding one thousand pounds conformable to the terms in the resolution of the House of Assembly and the estimate annexed under the signature of the Honourable the Speaker of the House of Assembly.

His Excellency laid before the Board the following Proclamation, which was ordered to be printed immediately and sent to the different Clerks of the Peace:

John Graves Simcoe.

George the Third, by the Grace of God, of Great Britain, France and Ireland, King, Defender of the Faith, and so forth.

To all His Majesty's subjects of this Province, Greeting,—

Whereas the loyalists who adhered to the unity of the empire, and others before and since the establishment of the Government of this Province, received tickets or certificates of occupation, or location, as testimonials of the claims of such persons to receive grants of lands when by His Majesty's gracious directions they should be issued. And Whereas deeds are now about to be made out to perfect titles to such lands as are possessed by the legal holders of tickets or certificates. But because the deeds cannot be completed until the lawful claimants make known their claims by the production of the aforeasid tickets or certificates:

Now know ye that I, by and with the advice and consent of the Executive Council of this Province, do hereby direct all His Majesty's subjects residing in the Western, Midland and Eastern Districts, claiming to hold lands as aforesaid, to deposit their tickets or certificates, or such other testimonial as they may possess, with the Clerks of the Peace of their respective district (being authorized to receive the same), that they may be duly transmitted to the Attorney General in order that grants may issue under the Seal of the Province to the rightful claimants. And in the Home District to the Attorney General and

I do hereby make known to all persons that if such tickets or certificates are not sent to the persons above mentioned within six months from the date hereof, the lands may be deemed vacant and granted to other applicants.

Given under the Seal of the Province this 21st day of August, in the year of our Lord 1795, and in the 35th of His Majesty's reign.

Signed, Wm. Jarvis,
Secretary.

His Excellency taking into consideration the services and rank of the Honourable Alexander Grant and the Honourable Æneas Shaw, members of the Executive Council, conceives it for the interest of His Majesty and the Province that their children should be granted severally 1200 acres of the waste lands of the Crown to mark the faithful services of these gentlemen and the important station to which it has pleased His Majesty to appoint them.[1]

His Excellency left the Council Chamber and was pleased to order for inspection and audit the accounts of the Province between the 1st of January and the 30th of June, 1795, inclusive; when the Council proceeded to examine:

The account of the Honourable Peter Russell, Receiver General, amounting to £6,642.13.1, 3/20 (sterling); leaving a balance in the Receiver General's hands of £2,418.19.8¼, 5/10.

The accounts of D. W. Smith, Surveyor General, from the 10th of October to the 10th April, 1795, £1,865.12.6 (Halifax currency); leaving a balance in the Surveyor's General hands of £40.1.0.

The accounts of the Lieutenant Governor's office amounting to £973. 15.2¼, 3/10 (Halifax currency); leaving a balance in the Lieutenant Governor's office of £616.7.11¼, 5/10.

Accounts of William Jarvis, Lieutenant Governor's fees, £31.10.0 (Halifax currency).

Accounts of William Jarvis, Secretary and Register, for fees, £30,13.10 (Halifax currency).

Accounts of John White, Attorney General's fees, £15.15.0 (Halifax currency).

Accounts of Capt. McGill, Commissary and Storekeeper, amounting to £1,010.16.4, 1/10; leaving a balance in Capt. McGill's hands of £65.0.10½, 8/10 (sterling).

Accounts of David Burns, Clerk of the Crown, amounting to £64.3.0.

Accounts of John Small, Clerk of the Council, amounting to £102,14.8.

The Honourable Board finds the expenditure of the above accounts properly authorized and vouched for; certify the same to be regular, orderly and to the best of their belief, just and true.

22nd August, 1795.

At the Council Chamber, Newark.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables Alexander Grant, Peter Russell and Æneas Shaw.

Petitions read.

George Gibson: Born at Woolwich, and early bound to the trade of a ship carpenter in Woolwich Yard in the year 1776. After having accomplished the time of his apprenticeship he went in the Ordnance Service at Gibraltar where he was at the building of eleven gun boats for His Majesty's sea service. Being a subject born and almost constantly in His Majesty's service and desirous to settle himself in this Province, prays for 500 acres of land and a town lot at York. Ordered a grant of a town lot at York, and 200 acres of land, and referred to the Surveyor General.

Isaac Davis: Prays for a back lot in the Town of Newark to build upon. Ordered that it be granted.

David Sutherland: Prays for his land as Lieutenant, having served in Col. Butler's Corps of Rangers. Ordered 200 acres for the present and the remainder when he shall bona fide have made a settlement.

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[1] Copy sent to Sydney Smith, Cobourg, 21st April 1882.

William Spurgin: Prays for 200 acres of land near Long Point. Ordered that it be granted.

William Fortune: Served as Captain of Pioneers and Guards during the late war. Received from Lord Dorchester one thousand acres of land. Prays for the quantity of land usually granted to officers of his rank. Ordered that the usual quantity of land to a Captain be granted, and referred to the Surveyor General.

Justus Sherwood, Peter Drummond, William Fraser, Thomas Fraser, Ephram Jones, Solomon Jones and Thomas Sherwood: Pray for a gore of land commencing at the junction of the Township of Oxford with Edwardsburgh, extending up to the upper line of William Fortune's survey, on the east side of the Rideau, extending from the said junction of Oxford with Edwardsburgh, along the rear line of Edwardsburgh, Augustus, Elizabeth, Young and Escotte, supposed to be about thirty-two miles in length, about three miles in width at the upper end, and terminating in a point at the lower end, supposed to contain about thirty thousand acres. Ordered to be referred to the Surveyor General.

The following letter was laid before His Excellency and Council from the Acting Surveyor General, with a summary of particulars relative to townships:

May it please Your Excellency:

In obedience to Your Excellency's Order in Council to me to report upon the nature and extent of the Orders of Council of this Province in regard to townships and other tracts of magnitude, I have hereunto attached a summary as the shortness of the time would admit, showing the names of the petitioners, the description of the tracts prayed for, the period of the Order of Council passing in their favor, with such remarks as come within the knowledge of the Surveyor General's office, stating the progress of the surveys and settlement of such tracts.

And as I understand it to be Your Excellency's pleasure that every individual, although settled in an associated township, should have a title deed from the King, I beg leave to suggest to Your Excellency the necessity of such settlers taking out their assignments in any manner Your Excellency may approve previous to their settling themselves on the lands; and this appears to be so material an object that I beg leave to press it on Your Excellency's consideration in Council.

All of which is submitted with the utmost respect to Your Excellency's wisdom.

Surveyor General's Office, D. W. SMITH,
Newark, 22nd August, 1795. Acting Surveyor General.

It having been reported to this Board by the Acting Surveyor General that settlers have placed themselves on some of the townships that have been allotted under the Order of Council without having taken the Oath of Allegiance, or appeared at his office or those of his deputies for assignments (imagining that the order of a grantee as sufficient authority without any other):

Resolved that notice be given from the Surveyor's office to all settlers that it is absolutely necessary they immediately produce to the Surveyor General or his deputies a recommendation from the grantee specifying the number of their lot and concession and a certificate of their having been duly qualified to become settlers in this Province, and that they take out assignments for their lands before they sit down on them. And all persons refusing or neglecting to comply with this order are to be turned off forthwith.

It having been reported by the Acting Surveyor General that no settlers have yet been placed on the Townships of Clarke or Cramahe by Hodges or Murdoch, to whom these townships were alloted under an Order of Council dated 22nd March, 1793: Resolved that said Order of Council be rescinded and the Townships of Clarke and Cramahe be considered as open.

Joseph Keeler having in his own behalf and that of his associate, Farr, resigned to this Board their claims to the Township of Alnwick allotted to them under former Order of Council, petitions that the Township of Cramahe may be allotted to them in lieu. Ordered that the Surveyor General is desired to cause the outlines of the said township to be surveyed forthwith.

Francis Elsworth, late of Butler's Rangers: States that he has been settled on 150 acres near the falls, which he has improved; that he purchased 300 acres of David Bailey. Prays to be confirmed in the same, and for 200 acres in addition, and for lands for his mother and four children. Recommended for 200 acres in addition to the land he occupies, and confirmation of the latter if the Surveyor General knows of no objection.

3rd November, 1795.

At the Council Chamber.

Present: His Excellency J. G. Simcoe, Lieutenant Governor, in Council.

His Excellency the Lieutenant Governor in Council having taken into consideration that part of His Majesty's instructions which directs: "That no grant whatever be made for lands within any district or tract in the Province of Upper Canada until the Surveyor General of Woods, or his deputy lawfully appointed, shall have surveyed the same and marked out as reservations to the King, his heirs and successors, such parts thereof as shall be found to contain any considerable growth of masting timber fit for the use of the Royal Navy, and more especially upon the rivers," and it being impossible to comply with this instruction as far as it relates to grants framed from certificates or assignments derived from the Government of the late Province of Quebec:

Resolved that the grants of lands assigned before the forming of this Government shall issue notwithstanding the Surveyor General of Woods or his lawful deputy has not certified to the reservations required respecting the same, but that the instructions above written shall be complied with in the fullest extent with respect to all grants upon subsequent assignments, and

Resolved that the Deputy Surveyor of Woods shall be directed to certify to the Surveyor General, under his hand, the number, extent and situation of such reservations as he may have made in any and every township of this Province, to and for the use of His Majesty, his heirs and successors, in the form following:

"I hereby certify that in the Township of................I have made and marked a reservation or reservations, being lot or lots.................... containing masting or timber fit for the use of the Royal Navy."

And should the said Deputy Surveyor have made no reservation, he shall certify the same to the Surveyor General in the form following:

"This is to certify that I have made no reservation in the Township of ....of masting or timber for the use of His Majesty's Royal Navy."

Resolved that the Deputy Surveyor of Woods being a provincial officer, be entitled to receive the following fees on all grants formed on certificates issuing since the establishment of this Province of Upper Canada:

On all grants of 200 acres and under, £0.1.0 (Halifax currency), and on all grants exceeding 200 acres, £0.2.0.

JOHN SMALL, C.E.C.

6th April, 1796.

Council held at the Garrison at York.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables Peter Russell and Æneas Shaw.

His Excellency requests the attention of the Honourable the Executive Council to ye carrying into execution such measures as may seem proper to be taken to promote speedy establishment and welfare of the Town of York, its vicnity and dependencies. It seems necessary to premise that the Lieutenant Governor having represented the importance of the harbour of York, or Toronto, to Mr. Secretary Dundas, that gentleman was pleased to agree with him in opinion.

The Lieutenant Governor having also communicated to Mr. Secretary Dundas the general plan of the townships to be granted in future, together with the exceptions proposed to be made at York, received Mr. Dundas' observations thereon, which will be laid before the Council for their information.[1]

This statement will clearly appear to the Honourable the Council by the following extracts from the Lieutenant Governor's letters to Mr. Dundas, and his reply thereto:

York, 16th September, 1793.

"I do myself the honour of transmitting to you the general plan for the arrangements of future townships in this Province, which the Executive Council have directed to be carried into execution as it seems to them to be properly calculated to enforce the provisions for the reserves of the Church and Crown agreeably to the late Act of Parliament.

"An exception it was thought proper to make on the military communications, as it is intended that they shall be carried on in as straight a line as possible, it was determined that such a line should divide the several townships, and for the speedy settlement of the country and the future maintenance of the road that no person shall be allowed a lot thereon who was not bona fide a settler, and that the reserves which would have fallen in this line agreeably to the general plan should be distributed among the rear concessions. The great importance that it appears to the Council to promote the erection of towns has also occasioned them to deviate from the general plan to assist the settlement at Toronto or York. It was thought expedient to reserve the whole of the broken fronts for garrison purposes, as well as to prevent the scattering of the inhabitants in such situations as their fancy or interest might induce them, which would ever prevent that compactness in a town, which it seems proper to establish. Two or three of the front concessions therefore are granted in this township and the reserves will be made in the back lands, which in reality are far more valuable for agricultural purposes, but reserves to great extent are made near this harbour of timber, which must in time become valuable as it is proposed to furnish from hence all the materials that may be wanted for the service of the Crown in the fortresses on the lakes and which at present are purchased from the merchants at a very exorbitant price."

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[1] The York report and these instructions given to Capt. Brock 22nd February, 1812.

York, 20th September, 1793.

"I also inclose for your inspection an actual survey of the harbour of York, late Toronto, the proper naval and military arsenal of Lake Ontario, and in a great measure, of Upper Canada.

"I propose therefore that the winter station of the fleet and the refilling port and such naval buildings as may be wanting be at York. This port is at a great distance from the foreign shore, is capable of being easily defended, and the grants of lands having been made by the present Government, sufficient care has been taken that great reservation of timber should be made for naval purposes."

Extract of a dispatch from Mr. Secretary Dundas to Lieutenant Governor Simcoe, dated Whitehall, 16th March, 1794:

"The plan for future townships transmitted in your letter of the same number and date with that which I have been answering, seems in placing the reserves for the Crown and the Church to have properly attended to the spirit and principle of the late Canada Act.

"Although there may be a good reason for making those reserves in the back lands in the particular Township of York, yet in that township also there should be a reservation in the front concessions for the glebe and residence to the clergyman who shall be appointed the rector under the provisions of the Act.

"The next question is where to establish the chief naval station of the Province, and herein I am of opinion with you that York is the most proper place for it.

"I also agree with you that the place upon the River Thames which you have marked as the scite for London, is well situated and judiciously chosen for the future capital, but as the defence of the colony is the first object, if that defence should be maritime, it follows that the settlement of York is the most important for the present, not as the future capital, but as the chief place of strength and security for the naval force of the Province.

"The communication which by your vigor and assiduity you have been enabled to trace between York and Lake Huron is of great importance and must prove beneficial to the Province in the several points of view in which you have considered it.

"In order to facilitate this communication you will, of course, give every encouragement for settling those parts of the route which are most convenient as stages for the traders and as depots for all articles of merchandise in their passage from York to Lake Huron."

Extract of a dispatch from Lieutenant Governor Simcoe to Mr. Secretary Dundas, dated 20th June, 1794:

"In the distribution of the front lots of the Town of York as it seemed to be probable that for a time this station would be the residence of the Government of the country, they were so laid out as to give one hundred acres to each of the officers of Government as an inducement to build an house in the town and a remuneration for its expense, but these grants I did not choose to make final until I understood your pleasure on the subject. A glebe and a residence for the clergyman were amongst such appropriations, but with the intention that such lands should be reversionary with the benefice.

"In the course of a few days a final ratification of the allotments will take place, when your instructions, Sir, will be attended with all that respect that is due to them.

"I shall give every encouragement to the settling of the communication between York and Lake Huron."

The Lieutenant Governor further informs the Honourable Council that Yonge Street, the road from York to Gwillimbury, from whence the Holland River becomes navigable into Lake Simcoe, the waters of which fall themselves into Lake Huron, has been opened this year by the soldiers.

The Honourable Executive Council are therefore requested to form themselves into a committee in order to take this statement into their consideration.

The Council are perfectly aware of the public reasons which have hitherto prevented the final settlement of the seat of Government and which now operate to make it necessary to occupy York for that temporary purpose.

His Excellency the Lieutenant Governor is confirmed daily in his opinion that the interest of His Majesty, and that of the public, requires that the seat of Government should so soon as possible be fixed internally on the spot selected for that purpose on the River Thames, but as he is under the immediate necessity, at present, of contracting those views which he trusts hereafter will be properly expanded, he desires the opinion of the Committee on such arrangements as may be necessary to give effectual support to the growth and welfare of the Town of York. In consequence he directs the Honourable Council in Committee—

First: To examine and report to His Excellency in Council upon all former proceedings of the Council relative to the settling the lands of the Crown in the Town and Township of York, and in their vicinity, and to state such parts thereof as shall seem just and expedient to be finally ratified and confirmed. For this purpose to call upon the Acting Surveyor General forthwith to lay before the Committee the several plans in his office of the Town and Township of York with a return of each and every assignment he has been directed to make therein, and any documents in his possession relative thereto.

Secondly: To summon every person to whom a certificate or Order of Council has been given, or assignment has been made as a settler on Yonge Street, to appear of himself or his lawful agent before the Committee and to recommend the grant of lands to those who may seem duly entitled to the same.

Thirdly: To call upon the settlers in the Township of York and to confirm such grants therein as may be proper.

Fourthly: To report what period, in the opinion of the Committee, ought to be allotted to each officer of the Government for the construction of a house in the front lots of the Town of York agreeably to a plan that shall be recommended by the Committee to His Excellency, provided such officers receive one hundred acres of land respectively in the first concession of the Township of York and adjacent to the town, in aid of the expense necessary to the erection of such an house conformably to the original principle.

Fifthly: To assign such portion of land as may hereafter reimburse Government for the expenses incurred in the opening of Yonge Street.

Lastly: To adjust such regulations as may be expedient and not burthensome, to give an architectural uniformity to the town, an object of very great importance in the establishment of a new province and to propose whatsoever may have a tendency to promote the welfare and speedy settlement thereof.

Queen's Rangers: It is necessary to state to the Committee of the Honourable the Executive Council the propriety of the reserves which in the opinion of the Lieutenant Governor should take place between the Humber and Smith's River, or the Tobicoke, for the express purpose of settling such soldiers as shall be discharged from the Queen's Rangers or 1st American Regiment, agreeably to the system which has been recommended by Major General Simcoe and approved of by His Majesty's ministers.

It is known to the Honourable the Committee that the settlement of the cultivated parts of His Majesty's dominions now forming the Province of Upper Canada, was principally carried into execution by the Provincial Regiments of Sir John Johnson and Colonel Butler being disbanded therein and by the accumulation of such loyalists who also had adhered to the unity of the British Empire. As the erection of the new Government naturally called for an enlargement of these settlements it became apparent that subjects of a similar description would in every respect promote the public welfare, and most eminently contribute to the foundation which had been laid for just obedience to His Majesty's authority extending as far as possible the general habits and opinions of the community and consolidating the original system on which the Province was established.

Upon this principle the Lieutenant Governor was particularly anxious to recommend to His Majesty's ministers such officers to be employed in the Queen's Rangers (and in other departments of the Government) as had served during the late war in America and were thereby entitled to His Majesty's gracious bounty in grants of his uncultivated lands equally as the original settlers, and that soldiers might be more readily procured to form settlements in those unlocated parts of the Province which it seemed requisite to occupy. The Lieutenant Governor proposed that every soldier who could procure a substitute in his room should, at the period of five years, have his discharge and be allowed a farm lot under the express tenure that he should be enrolled in the Provincial militia, and in case of war that he should be employed more expressly in doing duty in any fortress or garrison to be erected in the vicinity of his settlement. This, the Lieutenant Governor conceives from experience to be an essential purpose and for which trained soldiers only, not American militia, are adequate. His Majesty's ministers approved of his arrangement as appears by the following extract of a letter from the Right Honourable Henry Dundas to the Secretary at War, dated Whitehall, 4th September, 1791.

"It is intended that this corps shall at first be employed in assisting in the making of roads of communication between the different parts of the Province, in building of bridges, erecting of barracks, clearing of lands, navigating of craft or, in short, on any military or civil services which may occur. And as an encouragement to the non-commissioned officers and men to enlist in this service, it is proposed they shall be allowed their discharge after the expiration of five years, and be accommodated with 50 acres of land free of any expense excepting the payment of the usual fees for its location, provided they are capable of finding a substitute who may be approved by the commanding officer and agree to be enrolled in the provincial militia. This plan has been proposed with a view to the introducing generally the habits of military service and of establishing by means of the person to be discharged in the manner above stated such a militia as may be ultimately capable in any event which may arise of protecting the persons and property of His Majesty's subjects inhabiting that Province, and thereby to render the service of a part of a standing army every day less necessary there.

"Colonel Simcoe intends to propose to you that the two Captains and one of the Captain-Lieutenants shall be selected from the half pay, and that a

Lieutenant in one of the regiments serving in the East Indies shall be appointed the other Captain-Lieutenant. He has likewise some other arrangements of less magnitude to propose to you relative to the Subalterns which, as they will be fully stated to you by him, it is unnecessary for me to explain them. I think it right however to mention that as the officers whom he means to recommend to succeed the commissions in this corps are composed of persons who formerly served with him in North America and are represented to be perfectly well qualified for this particular line of service, it appears to me to be likely to be of advantage to the public service that his recommendations should, as far as they consistently can, be attended to."

The stations which it appears to His Excellency, Major General Simcoe, the Lieutenant Governor, most proper for the King's garrisons are, York on Lake Ontario; at Charlotteville near Long Point on Lake Erie; and at Gloucester or Pennatangushene on Lake Huron, with a view to render these places the maritime arsenals of the respective lakes.

At present York is the only station that can be occupied. The lands the Lieutenant Governor proposes to be allotted for the disbanded soldiers at York are in the situation as will be described by the annexed plan.

The Lieutenant Governor has always intended Brevet Major Smith to be the permanent commanding officer at York and to superintend this settlement and, of course, to receive such proportion of his military lands as may be convenient within the allotted district.

It is needless for the Lieutenant Governor to enter into the detail of this arrangement, the war in which Great Britain is engaged having materially affected greater objects, has also a tendency to suspend those of inferior consideration, but the Honourable Committee are informed that added to the levies made in this Province by the Old Regiments and the raising the Canadian Regiment, the Queen's Rangers have enlisted upwards of fifty natives of America, so that the Honourable Committee are able to judge how far it is probable in time of peace that the soldier of the Queen's Rangers who may wish for his discharge shall be capable by very slight exertions to place himself in a situation in which he may procure the substitute required, not to mention that there would be very little difficulty if necessary to obtain a substitute from Great Britain, and perhaps of a species of youths which may not immaterially be advantageous to the general interest of Great Britain.

York, 5th April, 1796.

To His Excellency Major General Simcoe, Lieutenant Governor and Commander in Chief of Upper Canada, &c:

Report of a Committee of Council held at York, 6th April, 1796, and continued by adjournments to the 28th of May, 1796.

Sir: The Committee of Council having taken into their consideration the instructions of yesterday's date which Your Excellency has been pleased to order to be laid before them, entirely concur with Your Excellency's opinion that the lots immediately butting on each side of the roads of communication, particularly Yonge Street and Dundas Street, ought not to be granted to any but bona fide settlers.

They therefore humbly submit to Your Excellency the following rule to be adopted in the locating those particular lots as a means of securing a full compliance with so beneficial a resolution:

Whenever Your Excellency in Council may judge proper to grant the prayer of a petition for a lot in either of those streets, the resolution thereon shall be so worded as to suspend an assignment thereof from issuing from the

Surveyor's office until Your Excellency in Council shall permit it, upon being satisfied that the applicant has built a house thereon and is actually dwelling therein, either in his own person or by a sufficient tenant, and the said resolution shall at the same time declare that the applicant shall forfeit all claim to the lot prayed for if he fails to execute the whole of this stipulation before the expiration of one year from the date of his permission to occupy the lot prayed for.

With respect to the exceptions and dispositions of the reserves in the vicinage of York, it appears to the Committee to be unnecessary for them to enter into a discussion thereof as Your Excellency's plan and recommendation have been already approved by one of His Majesty's principal Secretaries of State with only one additional reserve for the accommodation of the future rector, and this they observe Your Excellency has amply attended to by appropriating four hundred acres for that purpose in the concessions immediately behind the town.

The Committee beg leave to lay before Your Excellency a schedule of the persons to whom farm lots have been ordered and to recommend for confirmation by deed those to whom they find assignments have issued and those who though not under assignment they find either settled in the vicinage of York or making some advance towards an improvement in their respective lots:

May 25th, 1793. Thomas Collins: Prayed for a tract of land of 69,120 acres. Inadmissible, but ordered a grant of two farm lots for himself and son at Toronto.

September 2nd, 1793. John Scadding: For No. 15, east side the Don, first concession, under assignment. Recommended.

	Lots in the Town	East side Don	Concession	Recommended for Confirmation or Rejection
John Cox, U.E.	....	14	First....	Under assignment. Recommended
Frederick Brown	....	13	do	do do
G. & B. Mosley, between them	....	11	do	Benjamin recommended.
Ditto, ditto	....	10	Second	George being dead, this lot presumed to be vacant.
John and Thomas Mathews	....	10	First	John appeared; his lot improved.
Paul Wilcot	....	7	do	Appeared, improved with broken fronts. Recommended.
John Ashbridge	....	8	do	do do
Jonathan Ashbridge and James McDonald	....	9	do	Jonathan Ashbridge. Recommended for east half and broken front.
Messrs. Cozens (Brothers)	....	6	do	Samuel appeared. Recommended.
Ditto, ditto	....	16	Second	No application and ignorant which of the Cozens may be entitled.
Ditto, Daniel				
Andrew and James Hunter. William Cooper prays for this lot	....	5	First	Did not appear recommended as Andrew and James Hunter have left the Province.
Messrs. Cozens, Back lot and for lots Nos	....	24, 25	Fourth	West side Yonge Street. J. and B. Cozens appeared. Recommended.
John Philips	Town lot, ½	No.1	Third	No appearance or application.
David Ramsey, U.E.	do	2nd	First	Under assignment. No appearance. Recommended.
Christopher Robinson	do	13	Second	U.E. No appearance.
Magnus Swanson	do	13	Third	No appearance.
John Coon	....	18	Second	U.E. Recommended.
Capt. Bouchette, exclusive of former grants	2 lots for self and son	24	First	Township of York.

	Lots in the Town	East side Don	Concession	Recommended for Confirmation or Rejection
Ditto, as part of former grant	....	29	Second	Do. Under assignment. No appearance. Recommended.
John and Thomas Hewett	....	15	do	No appearance.
John Stoner	....	19	Fourth	do
Wm. Smith	Back lot....	11	Third	Recommended.
Joseph Dainty, a certain part of	....	33	First	Dead. Township of York.
J. B. Rousseau, a certain part of	....	34	do	Township of York. Recommended.
F. Willard, broken front..	....	12	do	Dead.
Peter Benville	Town lot...	4	do	No. 4 under assignment to Patrick Burn.
Joseph Burke	....	..	....	
Edward Gahan	....	4	Second	No appearance.
A Campbell	....	..	....	Ditto
William Demont	....	2	Third	Recommended.
Bensley Peters	....	3	do	No appearance.
Abraham Lawraway	....	19	Second	Under assignment. No appearance. Recommended.
Wm. Wilcocks	Front lot...	15	First	Township of York.
Wm. and Chas. Wilcocks.	....	24	Second	Do. Under assignment to Wm. and Chas. but the latter never having been in the Province; recommended for Wm. only.
Charles Wilcocks	do	13	First	Township of York. Not resident.
Chief Justice Osgoode (4/9/93)	do	5	do	Township of York. Not resident.
Ditto,	....	26	Third	do do
Peter Russell, Esq	do	14	First	Do. Recommended.
Ditto,	....	23	2 & 3	Do. (Under assignment) do
John White, Esq	do	4	First	Do. do
Wm. Jarvis, Esq	do	2	do	Do. do for No. 6.
E. B. Littlehales, Esq	do	1	do	Do. do for No. 18.
D. W. Smith, Esq	do	6	do	Do. do. for No. 10.
John McGill, Esq	do	7	do	Do. Recommended.
Mr. Justice Powell	do	11	do	Do. Not resident No. 11. Do. for a glebe.
Judge not appointed	do	12	do	Do. Not resident No. 12. Do. for Mr. Justice Powell.
Solicitor General	do	26	do	Township of York, do. for No. 13.
Incumbent	do	9	do	Do. No. 9 do for Mr. Macauley.
Major Smith	Town lot...	27	do	Dead.
Captain Shank	do	21	do	Township of York. Recommended.
Ditto	....	26	Second	do do
Ditto	....	27	Third	do do
George Porter	....	5	do	Recommended to be confirmed.
Capt. S. Smith	do	22	First	Township of York. Recommended.
Ditto	....	27	Second	Township of York. Recommended.
Ditto	....	28	Third	do do
Capt. Æneas Shaw	F. Town lot	20	First	do do for 23.
Ditto	....	28	Second	do do
Ditto	....	29	Third	do do
Capt. Spencer	do	23	First	Do. not resident. Do. for No. 20.
Ditto	....	30	Second	Do. do do
David Burns, Esq	do	25	First	Do. do
James Macauley, Esq	do	10	First	Do. do. for No. 9
Mr. R. Richardson	do	31	Second	Do. do
Adjutant McGill	do	25	Second	Do. do
D. McDonell	do			

June 7th, 1794. Thomas Ridout: Prays to relinquish two lots granted in the Township of York.

June 28th, 1794. James Macauley: Prays for lot No. 65 on the road leading from York to Lake Simcoe, and 400 acres in the rear of the above lot. Granted.

July 9th, 1794. The Town of York to be built according to a plan laid before the Council, and that all persons obtaining a grant to build a house within 3 years from the date of his certificate or forfeit the same.

Adam McColgan				Prays for lot in the Township of York.
Geo. Playter, Esq.	F. town lot	8	First	U.E. Township of York. Recommended.
Ditto		20	Second	Do. Under assignment. Ditto.
Ditto		3	do	Do. do do
James Playter		11	do	Do. do do
Eli Playter		12	do	Do. do do
John Playter		17	do	Do. do do
Watson Playter		21	Third	Do. West side the Don. Do.
(These in part of 2,000 acres).				
Bolton and McLeod		22	Second	Not resident, being vacant. Ditto for a glebe.
Bolton (Brother)		21	do	Do. being vacant. Do. for Abner Miles.
Lieut. Archibald McDonell		14	do	No appearance.
Thomas Ridout	Town lot	31	Third	Recommended for a town lot only having drawn 1,200 acres elsewhere.
John Denison		22	do	Township of York. No appearance.
Lewis Grant		24	do	Do do do
Augustus Jones		30	do	
John McKay, Sept. 5th, 1794	F. do			
Mr. James Clarke, Barrack Master	Town lot	15	Third	Recommended.
Capt. Bouchette in part of		3	First	Under assignment. Recommended.
an Order of Council		32	Third	Do. West of the Don. do
George Newman		25	do	Not resident. Recommended to be rescinded.
Capt. G. Glasgow	do	39	Second	Do do do
Lieut. J. Givens		32	do	Township of York. Recommended to be granted.
Lieut. Alexander McDonald	do	12	Third	Recommended.
Angus McDonald, Esq	B. do	7	Second	Do. No appearance.
Mr. J. McDonell		6	do	Not resident. Recommended to be rescinded, and reserved for a glebe.

June 19th, 1795. An assignment ordered and marked for Francis James Simcoe at York.

June 20th. John Small, Esq: Granted a front town lot and a farm lot.

July 3rd. John Ogilvy: Town lot. John Ryley: Ordered 200 acres in the vicinity of York. James Pitney: 200 acres near York.

July 4th. William Demont: Lot No. 2, third concession. Granted to him 2nd September, 1793. Also, lot No. 22, third concession, Township of York, under previous grant to John Denison.

July 18th. Resolved that the front lots of the town be extended to 88 feet and the lots on the back street be extended to 66 feet.

H. H. Farmer, Esq: Front town lot and farm lot. Granted.

July 29th, 1795. Ruben Clarke: A town lot. Granted.

Thomas Philips: Certificate granted by the Land Board of Lincoln for a lot in that district. Ordered that it be transferred for lot 81 on the west side of Yonge Street.

August 12th. Miss Russell: Prays to relinquish lot No. 10, second row. Recommended.

Parker Mills: Appeared and prayed to be confirmed in half lot No. 9, first concession east of the Don with broken fronts. Recommended.

Patrick Burn: Recommended for lot No. 4, first concession, with broken parts.

Aaron and Isaac Skinner: To be confirmed in lot No. 19, second concession, Township of York; the east end of the lot being on the River Don, which he was permitted by the Lieutenant Governor to purchase of Abraham Laraway on condition of building a mill. Recommended.

In compliance with the second article of Your Excellency's instructions, the Committee summoned every person to whom a certificate or Order of Council had been given, or assignment had been made as a settler on Yonge Street, to appear of himself or by his lawful agent, and the under mentioned persons having appeared before them in consequence, they beg leave to submit their observations thereon to Your Excellency's wisdom.

Joseph Kendrick: Having assignment, and made some improvements on lot No. 6, west side, recommended.

Duke William Kendrick: Do. on lot No. 7, west side, recommended.

Nathan Chapman, by his agent, Nicholas Miller, produced assignment and some improvements on lot No. 28, do. Recommended.

Nicholas Miller: Under assignment, a house and improvements on lot 34, east side. Recommended.

John Barbour: Under assignment for lot No. 35, east side. But it appearing from the testimony of Nicholas Miller that he never made any improvement on this lot since the date of the Order of Council on the 21st June, 1794, and that Balser Munshaw has built a house and made a considerable improvement on the lot, the Committee humbly submit the propriety of rescinding the assignment to Barbour and granting a patent for lot No. 35, east side Yonge Street, to Munshaw, he paying fees.

Stephen Colby: Produced an assignment. Has built a house and made improvements on lot 35, west side. Recommended.

Captain Lippincott: Has timber ready to build a house. Recommended for lot No. 22, east side.

Samuel Sinclair, by his agent, Stephen Colby: No assignment or improvement of consequence. Recommended to be permitted to remain the usual time and if he builds and improves, to have lot 36, west side.

William Bond: Under assignment for lot 63, east side. Has built and improved. Recommended.

Joseph Bouchette, by his agent, William Bond: To pay fees, lot 62, east side. Recommended.

Jonathan Paul Willott: Under assignment, house and improved, lot 38, west side. Recommended.

Samuel Cozens, U.E.: Under assignment has built on lot 38. Recommended lots 38 and 39, east side.

Joshua Cozens: Reports he is improving lot No. 24, fourth concession west side of Yonge Street for himself. Recommended.

Benjamin Cozens by agent, Joshua Cozens, is improving lot No. 25, fourth concession. Recommended.

T. Hinds by his agent, Joshua Cozens, built house and 2 acres cleared. Assigned for 63, west side. Recommended.

William Jarvis, Esq, by his agent, two houses and some clearing on No. 49 and No. 50, east side.

William McLenan[1] by his agent, house built and some clearing on No. 82, west side.

Thomas Philips, by his agent, house built and an acre cleared under assignment for No. 81, west side.

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[1] McLenan supposed to be run off to the States.

Thomas Kinear, by his agent; comfortable house, one acre cleared under assignment, 48 east.

W. B. Peters, by his agent, improving lot No. 51, east side.

Recommended that as soon as it is made to appear that the parties are actually living on, or have sufficient tenants on the preceding seven lots, from No. 63 to 51, patents may issue in course, but not before—they being allowed twelve months to comply with this stipulation.

William Smith, under assignment, small house and improvements, No. 39 west side, when occupied by a sufficient tenant. Recommended.

Hugh McLean, by agent Mr. J. McGill, recommended for lot No. 41, east side.

Thomas Lyons, by his son John Lyons, has commenced an improvement on No. 42, east side.

Samuel Heron, by his agent John Lyons, has built a house No. 49, west side.

John McKay: Mr. Jones reports has built a hut and some improvements, under assignment, No. 64, west side.

Charles Sellick: Has a family living in a house with improvements, under assignment, U.E., No. 66, west side.

Recommended that patents may issue for the last and for the other three when proof is adduced that inhabitants are dwelling thereon.

Edward Wright, answered for by Mr. Jones, under assignment, a small hut and some improvements, U.E., No. 67, west side.

William Graham has timber ready for a house and three acres cleared, under assignment, No. 77, east side.

Charles Feathers, by agent, has timber for a house, etc., for No. 79, west side.

Frederick Smith, by his agent Mr. Graham, house built and improvements under assignment, No. 78, west side.

These four recommended for patents on producing the required certificates.

Bernard Van Weide, by his agent Mr. Berczy, a good house, under assignment, No. 61, east side.

L. C. Brower, by agent, has squared timber ready for raising a house, under assignment, No. 53, east side.

D. C. Brower, by agent, has squared timber for house, under assignment, No. 57, east side.

These three not being in the Province, cannot be recommended but when certificates are adduced of the lots being properly tenanted and inhabited, they are recommended for patents.

John Hayes, by his agent R. Franklin, a small improvement under assignment, No. 60, west side.

Samuel Backhouse, by his agent R. Franklin, a hut and small improvements, under assignment, No. 62, west side.

Robert Franklin, by self, a hut and small improvements, No. 61, west side.

The above three persons not coming within the description of those proposed to be settled on Yonge Street, the Committee recommend that the lots opposite their names be open for more suitable occupants.

James Macaulay, Esq., means to improve under assignment for lot No. 65, west side.

Samuel Osbourne has built a small house and been resident with his family. Recommended for No. 28, east side.

Asa Johnson has built, improved, and lives thereon, under assignment, for lot No. 29, west side. Recommended.

Richard Richards, by Mr. J. Lawrence, improving No. 25, east side.

John McDougal prays for and engages to improve and settle No. 3, west side.

James Pitney has cleared two acres, and logs cut for building, under assignment, No. 66, east side.

Joseph Johnson and Abraham Johnson, by Joseph Johnson, cleared 15 acres, house built, No. 20, and in a state of cultivation, No. 19, west side.

Nicholas Johnson, Thomas Johnson and Lawrence Johnson, prays for lots Nos. 20, 21 and 19, east side.

The above eight recommended in the same terms.

The following persons are returned by the Surveyor General as having assignments but no one appeared to answer for them to the Committee: Gilbert Birry, John McKailey, Abraham Iredell, William Yeoman, John McBride, Fred. Ford, John Ryley, Elizabeth Thompson, Christian Wilkie, Cyrus Everit, and Abner Miles.

The Committee proceeded next to carry into execution the third article of Your Excellency's instructions by calling upon the settlers in the Township of York and confirming them in their possessions, agreeable to Your Excellency's directions.

The names of those who appeared are: J. B. Rousseau, recommended for lot No. 34, first concession; and Mr. J. Lawrence, who prays for the broken fronts of lots Nos. 1, 2, and 3 on the Humber not including the island. Submitted to Your Excellency's determination; and also

Benjamin Davis, U.E., lot No. 7, Humber concession.
Elias Anderson, No. 5, do. with broken front.
Zekel Chamberlain, in half No. 4, do.
Joshua Chamberlain, Sen., in half lot No. 3, do.
Joshua Chamberlain, Jun., No. 3, do. and ½ lot No. 4.
Jacob Philips, No. 2 with broken fronts.
Levy Devines, Nos. 9 and 10, broken fronts.
Abraham Devines, Nos. 7 and 8, do
Isaac Devines, No. 6, do
John Small, Esq., No. 14, do
John Wilson, U.E., Nos. 4 and 5, do

John McBride, U.E., prays to relinquish his assignment of lot No. 16 in the Town of York and to have No. 14 in the front division of block No. 4 in the second range of blocks, assigned him in lieu. Recommended.

Captain Lippincott, prays for lot No. 16 in the same division, same block and same range, having built thereon. Recommended.

Barney Conolly: Recommended for the east half of No. 11, front division of block No. 3, second range of blocks, at York.

George Gibson: Prays for lot No. 14 in the third concession of York. Submitted to Your Excellency. (Not approved, J.G.S.)

William Cooper: Prays to relinquish No. 5, east side Yonge Street, and to have No. 5, first concession, Township of York, when His Excellency in Council shall determine to rescind the assignment to A. and James Hunter. Recommended.

The Committee concur with Your Excellency in the choice of No. 6, second concession, Township of York, for a glebe.

The Committee having taken into consideration the fourth article of Your Excellency's instructions respecting the City of York, beg leave to recommend that the front row of each block in the front range of blocks shall be divided into two tenements instead of three, comprising a square of 132 feet, and that when the town may be extended that the future front blocks may be laid off on the same principle. But this rule is not meant to preclude Your Excellency from granting to the higher officers of Government upon their specific petitions to the extent of half a block.

The Committee begs leave likewise to recommend to Your Excellency that every applicant for a town lot shall be obliged by his license of occupation to lay down his house on a line which shall be marked for him by the Surveyor, which line in the front of the first range shall be retired twelve feet from the edge of the street in order to allow a space for palisades or other ornaments in front of the buildings at the pleasure of the occupant, and that the front of all the other back buildings shall be on an exact line with the sides of the streets.

It is also recommended that the occupants of the front range of houses shall be obliged by their tenure to give them a front of at least forty-six feet which may be extended but not diminished; and as it hoped that the occupants of the front row of houses will make a point of raising such buildings as shall be an ornament to the town and worthy of so beautiful a situation, it is recommended to allow three years for the completion of their plan before officers of Government shall be considered as having forfeited their claim to the douceur of 100 acres in the first concession, as proposed by Your Excellency.

John Kendrick, by his brother Joseph Kendrick, prays to relinquish his claim to lot No. 4 in the front of the eastern block in the rear range of blocks in favor of D. W. Smith, Esq., the Acting Surveyor General, who agrees to give him a valuable consideration for the same and his improvements; and further prays to be granted the lot No. 6 of block No. 2 in the front range of blocks, in lieu. Recommended.

D. W. Smith, Esq., appeared and prayed for the lot relinquished by John Kendrick, and the lot in the rear of it. Recommended.

Miss Elizabeth Russell, by Hon. Peter Russell, desires leave to relinquish lot No. 10 in the rear division of block No. 3, first range of blocks, and prays for lot No. 11 in the rear division of the same block No. 3 and first range of blocks. Recommended.

The Hon. Peter Russell prays by petition for the east half of block No. 3 on the back corner of which he has a house. Recommended.

Captain William Demont prays to be confirmed in lot No. 8 in the rear division of block No. 2, first range of blocks; and lot No. 10 in the front half of the third block of the second range of blocks. Recommended, having built thereon.

Samuel Heron, for his town lot No. 8 in the front division of the second range. Recommended, having built thereon.

Duke William Kendrick, for lot No. 13 in the rear half of No. 4, second range of blocks. Recommended, having built thereon.

Joseph Kendrick, for lot No. 20 in the front division of block No. 5, second range of blocks. Recommended, having built thereon.

Iram Kendrick, for lot No. 17 in the fifth block, second range of blocks. Recommended, having built thereon.

John Kendrick, to stand over.

Captain Graham, for lot No. 17 in the rear division of the fifth block, first range of blocks. Recommended, having built thereon.

John McDougal, for lot No. 16 in the rear division of the 4th block of the first range of blocks. Recommended, having built thereon.

William Cooper, for lot No. 14 in the rear division of the 4th block, second row of blocks.

Richard Lawrence, U.E., for lot No. 18, rear division of block No. 5, front range. Recommended, having built thereon.

William Smith, for lot No. 12, front division of block No. 3, second range of blocks; built on and recommended.

Samuel Osbourne, for lot No. 19, rear division of block No. 5, built and recommended.

John Small, Esq., prays for the east half of block No. 1, front range of blocks. Recommended.

William Allan, prays to relinquish No. 6 in the rear division of block No. 1, in the front range of blocks, and to have No. 7 in the front division of the eastern block in the rear range of blocks. Recommended.

In answer to the fifth article of Your Excellency's instructions, the Committee beg leave to recommend that the four lots originally appropriated and under assignment for Mr. Berczy on condition that he laid out Yonge Street in the same manner as Dundas Street, and completed the same in one year from the 15th of September, 1794, may be sold for whatever sum they may bring, and the money applied for the expenses incurred in opening Yonge Street; or that they may be otherwise disposed of to reimburse Government, and as Mr. Berczy has justly forfeited his claim to those lots from a failure in the conditions, but has been at some expense in endeavouring to carry them into execution until he was obliged to stop by the sickness of the labourers he had employed on that service, it is recommended by the Committee to Your Excellency to grant Mr. Berczy such a portion of land elsewhere in remuneration as Your Excellency may judge proper.

The sixth and last article of the instructions has been already attended to in the previous recommendations of the Committee, and it only remains for them to suggest the propriety of appropriating certain blocks in suitable situations for a church, a gaol, a court house and a market place, which is humbly submitted to Your Excellency's wisdom.

Queen's Rangers: The Committee is happy in concurring with Your Excellency's ideas on the subject of the Queen's Rangers, and sincerely hopes that nothing may prevent or interrupt the very wise purposes for which that corps was raised, from whence the most salutary consequences might be expected to the welfare of this infant settlement. And as the Committee conceives that the services of the Queen's Rangers are likely to prove at least equally beneficial to His Majesty's interest in this distant part of the Empire with those of Sir John Johnson's Regiment, and Colonel Butler's Corps to the non-commissioned officers and privates, of which 500 acres and 300 acres have been allowed on their reduction, it begs leave to recommend as an act of justice that the non-commissioned officers and privates of the Queen's Rangers may be placed on the same footing and have the same quantity of land granted to them on their discharge.

28th May, 1796. Signed: Peter Russell,
Chairman of a Committee of Council.

York, 15th July ,1796.
Signed: J. G. Simcoe.

7th May, 1796.

At the Council Chamber, Navy Hall.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables Alexander Grant, Peter Russell and Æneas Shaw.

The Hon. Mr. Grant having represented that it was the wish of several merchants and other respectable inhabitants of Detroit that a town should be laid out at Bois Blanc as near as may be to the harbour and proposed fortifications at that place: Resolved that His Excellency, the Lieutenant Governor, and the Honourable Executive Council being of opinion that it is for the public interest and benefit of the Province that the wishes of the applicants be complied with. Resolved that an especial meeting of the Executive Council be held on this important subject so soon as may be after the arrival of the Hon. Mr. Baby.

His Excellency left the Council Chamber and was pleased to order for inspection and audit the accounts of the Province from the 1st July, 1795, to 31st December, 1795.

The following accounts were examined:

The Hon. Peter Russell, Receiver General, payments amounting to £5,656.19.1¼; balance on hand 31st December, 1795, £1,799.8.8¼ 1/20. Total sterling, £7,456.7.9½ 1/20.

D. W. Smith, Esq., Acting Surveyor General: Disbursements from the 10th April to 10th October, 1795, £1,987.0.3½; balance in hand at that time, £53.0.8½. Total, Halifax currency, £2,040.1.0.

John McGill, Esq., Commissary of Stores and Provisions: Disbursements, £653.15.4 8/10; balance in hand, £37.12.4½. Total, £691.7.8 8/20.

John Small, Esq., Clerk of the Council, Sterling £102.4.0.

John White, Esq., Attorney General. Fees of his office. Sterling, £42.8.0.

William Jarvis, Esq. His Excellency, the Lieutenant Governor's fees. Quebec currency, £57.10.0.

William Jarvis, Esq., Secretary and Registrar: Fees of office. Quebec currency, £58.1.11.

His Excellency, the Lieutenant Governor's office: Disbursements, £236.5.6. 8/10. Balance remaining in the office, £380.2.5. 5/10. Total, £616.7.11¼ 5/10.

David Burns, Esq., Clerk of the Crown and the Common Pleas: Sterling, £39.1.0.

Thomas Ward, Judges' Crier on the Circuits: Quebec currency, £4.9.8.

The Council find the expenditures thereof to be properly authorized and vouched, therefore certify the same to be regular and to the best of their knowledge and belief, just and true. Signed by the Hon. Alexander Grant.

JOHN SMALL.

11th May, 1796.

At the Council Chamber, Navy Hall.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables Alexander Grant, Peter Russell and Æneas Shaw.

His Excellency moved that a proclamation be laid on the table relative to the lands appropriated to certain persons and their associates. His Excellency also directed that sundry papers be read containing the requests of the magistrates of the Home District for a loan of money to finish the court house and gaol, and moved that they be laid upon the Council table.

JOHN SMALL.

12th May, 1796.

At the Council Chamber, Navy Hall.

Present: His Excellency J. G. Simcoe, Lieutenant Governor; The Honourables Alexander Grant and Æneas Shaw.

The report of the Acting Surveyor General bearing date the 21st of September, 1795, relative to the lands between Long Point and the Grand River was laid before the Council.

Resolved that the Lieutenant Governor, with the advice of the Honourable Executive Council, confirm the various arrangements made therein and order the customary measures to be taken to grant title deeds to the actual settlers.

Captain John Powell: States that he had served in the Indian Department and has only drawn sixteen hundred acres. Prays for fourteen hundred still due to him, and for family lands. Ordered that the remainder of his own lands, and one hundred and fifty for his family, be granted him.

John Collins: Prays for two hundred acres of land in the settlement of Long Point, having served His Majesty in different regts. many years. Granted two hundred in the neighbourhood of Long Point and referred to the Surveyor General for location.

James Neville: Came into this Province in 1787, with a wife and five children (has now nine). Has only received one hundred acres of land and prays for himself and his family an additional quantity at Long Point settlement. Granted four hundred acres and referred to the Surveyor General for location.

Geo. Small: Served last war, as Corporal under Sir John Johnson and prays for six hundred acres. Ordered a grant of four hundred acres.

James Clement, late Store-keeper and a volunteer in the Indian Department during the American War: Has received 400 acres of land and prays for an addition thereto, and likewise 200 acres for his wife Catherine Clement (a daughter of the late Lieut. Adam Crysler). Petitioner begs leave also to represent that the Land Board of the late District of Nassau issued a recommendation for the heirs of the late Lewis Clement, (petitioner's father), for 2000 acres of land, as a Lieut. in the Corps of Rangers, which right has been made over to petitioner who prays the same may be confirmed to him. Granted two thousand acres to the heirs of the late Lewis Clement and 200 acres to Catherine Clement, the daughter of a loyalist.

Benjamin Hardison: Has resided in this Province since the year 1776; has uniformly demeaned himself as a good British subject, has received only one lot of about 180 acres which he has improved, and in good fence; from the commencement of the settlement he has done all in his power to forward and promote its prosperity and trusts in the benevolence of His Excellency for a further grant. Ordered that he shall have an additional grant of one thousand and sixty acres.

Gideon Cooley, Sen. whose son Luther Cooley received a ticket of location from Andrew Pierce for lot No. 1 in the 12th con. on the head waters of Patterson's Creek on Lake Erie, the said Luther having by the paper annexed to his petition given up his right thereto to the petitioner, who prays that the same may be granted to him. Ordered that 200 acres be granted and referred to the Surveyor General for location.

Gideon Cooley, Jun.: Has a wife and five children and has never received any land. Prays for three hundred acres in the Long Point Settlement or in the Township of Townsend. Ordered that the petitioner shall have a grant of two hundred acres.

Henry Smith, a private soldier in Butler's Rangers, prays for family lands in addition to the three hundred acres he has received, having a wife and four children. Ordered, one hundred acres family lands.

John and Geo. Cockle: Both served in Butler's Rangers last war. John has received of His Majesty's bounty 100 acres and George 200 acres. Pray that they may each receive a grant of what may be further due to them. Ordered that John Cockle receive an additional grant of 200 acres, and that Geo. Cockle receive one hundred acres.

Mathew Forrest, late Sergeant in Sir John Johnson's Corps: Prays for an additional three hundred acres of land, having received only 200 acres; and for lands for his family. Ordered that he shall have an additional grant of three hundred acres.

Christian McDonell, late of Butler's Rangers: States that his father, Randal McDonell, was a Sergeant in Butler's Rangers and that he located 400 acres of land in Gainsborough, which he considerably improved, and that he died about two years ago without having received certificates for them. Prays that the same may be assigned to him and likewise the remaining 100 acres due to him. Ordered, to be assigned to Randal McDonell.

Benj. Frolick: Served in Butler's late Rangers, as a non-commissioned officer, last war. Has already received 400 acres of land; brought his wife and family into this Province in the time of the war; had then four children, now seven. Prays for a further grant of land. Ordered, an additional grant of two hundred and fifty acres.

Peter Ochre: Has a wife and three children. Has lived in Newark three years, never applied for land. Prays for a grant and a town lot in Newark. Ordered, a town lot.

Henry Anguish, son of an old Ranger: His wife's father was a Sergeant in Butler's Rangers; has four children, has received only about fifty acres of land, and prays for an additional grant. Ordered 200 acres for his wife, the daughter of a loyalist, and 200 acres for himself.

Zakariah Hainer, a soldier in the late Rangers: Has never taken any land, and prays for the usual allowance. Ordered a grant of three hundred acres.

Wm. Tip, from Germany; served as a soldier under General Reideisel and was taken at Stillwater; has a wife and two children. Prays for three hundred acres. Ordered that he shall have a grant of three hundred acres.

Jacob Cockanour, Farmer, late from Pennsylvania; has received no land and prays for a grant of 200 acres. Ordered to be granted and referred to the Surveyor General for location.

John Harris: Served in the Old French War, was a private in Butler's Rangers; has received 100 acres of land whereon he now lives, and brought into this country a wife and one son. Prays for lands for himself and family. Ordered a grant of three hundred acres.

John Brooks: Has been two years in the Province, prays for a grant of land. Ordered 200 acres; for location referred to the Surveyor General.

John Palmer: His wife was the daughter of Lewis Maybee, a Sergeant in the late corps of Butler's Rangers. Prays for 200 acres of land. Ordered that 200 acres be granted his wife the daughter of a loyalist.

Richd. Slingerland, a private soldier in Butler's Rangers: Had a wife and two children in the year 1787 (has now three). Prays for family lands. Ordered that he shall have a grant of one hundred and fifty acres family lands.

John Ellis: Prays for lot No. 326 in the Town of Newark. Ordered to be granted and referred to the Surveyor General for location.

Valentine Scram, a carpenter. Has been in this country eleven years, is married and has received no land. Ordered a grant of a town lot and two hundred acres.

Upon the Acting Surveyor General's representation to His Excellency the Lieutenant Governor in Council on the necessity of having the front concessions from Lake St. Clair to Point Pelee on Lake Erie resurveyed owing to the inaccurracy of the former survey, in order to prepare a description for His Majesty's Attorney General, that the settlers there may be enabled to take out their deeds. Ordered accordingly.

J. S., C.E.C.

21st May, 1796.

Council Chamber, Navy Hall.

Present: His Excellency John Graves Simcoe, Esq., The Honourables Alexander Grant, James Baby, and Æneas Shaw.

His Excellency having laid several papers before the Council containing the resolution of the magistrates of the Home District, and papers appertaining thereto, to solicit the loan of three hundred pounds for the purpose of enabling the District to complete the gaol, and court house, now building in the Town of Newark. Resolved, that it is inexpedient to make the loan requested.

Captain Lindsey: Prays to locate 700 acres of land, agreeably to annexed certificate, and the residue of his lands as a Captain. Ordered 700 acres; and upon producing his commission as a Captain, the residue will be assigned to him.

25th May, 1796.

Council Chamber, Navy Hall.

Present: His Excellency John Graves Simcoe, Esq., and The Honourables Alexander Grant, James Baby, Peter Russell, and Æneas Shaw.

His Excellency and Council having taken into further consideration the establishing a town at Bois Blanc. Resolved that application be made to His Excellency the Commander-in-Chief to take measures for the purchase of the Huron reserve, that a town may be laid out therein.

His Excellency then submitted the following Proclamation to the consideration of the Board.

UPPER CANADA

By His Excellency John Graves Simcoe, Esq., Lieutenant Governor and Major General of His Majesty's Forces.

PROCLAMATION.

Whereas in pursuance of His Majesty's gracious intention respecting the granting of and settling of the waste lands of the Crown in this Province made known by my Proclamation bearing date the seventh day of February, 1792, many persons made applications for certain portions of the ungranted lands of the Crown in their own names and the names of their associates, which applications have in various instances been complied with subject to the terms held out in the Proclamation aforesaid.

And Whereas it is a matter of public notoriety that many of the said applicants have failed in the performance of the conditions required of them.

And Whereas others of the said applicants who have received Orders of Council preparatory to His Majesty's grant under the Seal of the Province subject to the terms aforesaid from the Lieutenant Governor-in-Council, have wilfully perverted His Majesty's most gracious intentions signified in the Proclamation aforesaid, namely that the respective patentees of such lands should take their estates granted to them severally free of quit rent, and of any other expenses, than such fees as are duly authorized and established, by publicly and openly offering for sale such townships or portion of townships, or by affixing an annual rent charge to be paid for the grant of the same and by many other sinister and illegal transactions in manifest violation of the principles and conditions of the Proclamation aforesaid, and of the terms under which they solicited for themselves and associates such townships or portion of townships.

Be it known therefore to all concerned, that it was this day resolved in Council that all persons claiming by virtue of an Order of Council to receive His Majesty's grant in and for the townships hereinafter named have forfeited the same. That the townships of Osgoode, Wolford, Montague, Russell, Kitley, Loughborough, Huntingdon, Rawdon, Murray, Clarke, Whitby, and Windham, are, and they are hereby declared to be vacant and free for the admission of such persons as shall be desirous of occupying and settling the same, agreeably to the terms and conditions of the Proclamation aforesaid.

And Whereas many other townships and tracts of land have been appropriated under orders of the Lieutenant Governor-in-Council to various applicants and their associates.

And Whereas for want of information in respect to the present improvements of the same, if any such be made or the future intentions of the said applicants, it does not appear to be expedient that such townships or tracts should at present be declared vacant; it was further resolved that all persons who intend to avail themselves of the benefit of any appropriations made in any townships or tracts of land whatsoever be directed, and they are hereby directed accordingly, to signify the same to the Clerk of the Honourable the Executive Council on or before the first day of June, 1797, and to shew cause why the Order of Council made in their behalf should not be declared null and void.

And it is further resolved that all persons who occupy lots of land in any of the townships or tracts aforesaid should be directed to apply (and they are hereby directed to apply) for their respective patents or title deeds, agreeably to the terms and conditions specified in the Proclamation aforesaid, within the space of six months—or such lands may be considered as vacant and given to other applicants of which all persons will take notice and govern themselves accordingly.

Given under my Hand and Seal at Arms at our Government House at Navy Hall, the twenty-fifth day of May in the year of our Lord one thousand seven hundred and ninty-six and in the thirty-sixth year of His Majesty's reign.

Signed J.G.S.

By Command of His Excellency. Approved and ordered to be published.

J. SMALL, C.C.

Peter Tenbrook, Esq. attended the Council and produced certificates granted to him by the late Land Board of Lincoln for land on the north side of Burlington Bay being lots Nos. 7 and 8, and praying to have them confirmed to him. Resolved that it appearing from the face of documents brought forward in support of the petitioner that the Land Board has exceeded the limits of their power granted to them by the Rules and Regulations for the Land-granting Department, and no report being made from the Surveyor General's office at Quebec of the location of the petitioner and it appearing further from the dates of the certificates that the lands in question were granted at a time when they were the property of the Indians, this Board cannot confirm the certificates.

Petition of Saml. Gardner. Has been long settled in the Province, and prays for twelve hundred acres of land. Ordered, that the same be granted.

Abraham Cuyler: States that his loyalty and attachment to His Majesty and the British Government at all times, and his services during the British revolution may be so well known as to render it needless now to enumerate or particularise, but begs leave to mention that his conduct on that occasion has received the approbation of His Majesty's Ministers and Commander-in-Chief, and flatters himself that his exertions in favor of the Royal Cause in every situation have been equal to any one of His Majesty's most loyal and faithful subjects. The memorialist being desirous of making a permanent establishment for the benefit of his family in Upper Canada, and not yet having obtained a grant of land in any of his Majesty's Colonies, prays His Excellency to grant him (for his services during the American War as Lieutenant Colonel, Commanding a Corps of Loyal Volunteers), five thousand acres of land, and also further prays that His Excellency will extend the Royal bounty and grant to each of the rest of his family such further quantity of land as His Excellency may think they merit; and that the said lands may be located and granted in the Township of Cambridge lying between the 4th and 8th range of lots in said township including the 4th and 5th falls on the River Petit Nation. Names of petitioner's family, viz: Jane Cuyler; Cornelius Cuyler, Captain in His Majesty's service, having served as Lieut. in America last war; Jacob Glen Cuyler (present) having taken the oaths and made the declaration required; Cathalina Cuyler, and Elizabeth Cuyler, the petitioner's daughters of age. Ordered a grant of five thousand acres for himself and twelve hundred acres for his son, Glen Cuyler, in the Township of Cambridge.

Petition of Capt. Thomas Fraser and Captain Duncan, in behalf of themselves and associates. Ordered to lie on the table.

J.S.

2nd June, 1796.

Council Chamber Navy Hall.

Present: His Excellency John Graves Simcoe, Esq., The Honourables Alexander Grant, James Baby, and Æneas Shaw.

Petitions read from:

Abel Stevens: Has been at a considerable expense, not less than $1000, in bringing settlers, and removing his family into the Province; has received 200 acres only. Prays for an additional grant of 1000 acres including the rapid between two small lakes on the south west quarter of Bastard. Ordered that the same be granted.

David Lee, Jun., son of David Lee: Prior to his father's death he obtained a grant for 1000 acres, being son and heir. Settled in the Province in consequence of the grant to his late father. Prays that the 1000 acres may be confirmed to him and that he may be located in the front of the Town of Bastard. Ordered that the patent be issued in the name of the father, and so soon as the lands are located, application must be made for the same.

Mary Graham, wife of Oliver Graham: Prays for 200 acres of land as a loyalist (U.E.). Ordered that it be granted.

Major Evans: Prays for a grant of lot No. 12 and broken front, if vacant, in the Township of Darlington. Ordered to be referred to the Surveyor General to be granted, if vacant.

Richard and Henry Arnold, both Lieuts. in the late British American Legion of Cavalry commanded by General Benedict Arnold: Stated their services entitled them to His Majesty's bounty, and pray for a grant of two thousand acres each in the Township of Kitley. Ordered that the same be granted provided they become actual settlers in the Province. Referred to the Surveyor-General for location.

Richard Arnold, as agent to Major General Benedict Arnold: Has never drawn land elsewhere and prays for a grant in the Townships of Kitley or Wolford. Ordered to be granted provided he becomes a resident in the Province.

J. S.

3rd June, 1796.

Council Chamber, Navy Hall.

Present: His Excellency John Graves Simcoe, Esq., The Honourables Alex'r Grant, James Baby, Peter Russell, and Æneas Shaw.

Read petitions from:

Richard Lovekin, who came into this Province at a very great expense with the whole of his family consisting of a wife, four grown-up sons and three daughters. Prays for a grant of the waste lands of the Crown. Ordered a grant of twelve hundred acres to Richard Lovekin, Sen.; two hundred to Richard Lovekin, Jun.; two hundred to John Lovekin, and that when Thos. and Wm. Lovekin appear in this Province two hundred acres each be granted to them.

D. W. Smith: States that his late father applied for a grant of a small farm adjoining the Town of Newark and that he has abandoned the possession of so much of it as fell within the Military Reservation at Missisaga Point. Prays for a grant of what remains lying between the said reserve and the Town of Newark, a small run of water on Lake Ontario, containing about twenty-five or thirty acres. Ordered that it be granted.

Thomas Merritt, Cornet: States his services during the American War and his desire of becoming a permanent settler in the Province with his family. Prays for the usual bounty to reduced officers of his rank and permission to locate at Long Point or in its vicinity or on the north side of Lake Ontario. Ordered that it be granted, and referred to the Surveyor General.

Richard Beasley: States that he came into the Province in 1777 and served two years as Acting Commissary and has only received two hundred acres. Prays for a further additional grant. Ordered that one thousand acres be granted additional.

Angus Mackintosh: States that he has been a resident of Upper Canada for 19 years and has executed the office of Civil Magistrate. Prays for a grant of waste lands of the Crown in the Western District. Ordered a grant of twelve hundred acres.[1]

James Mackintosh: States he has been in Upper Canada for 13 years. Is desirous of forming a settlement. Prays for a grant of waste lands of the Crown in the Western District. Ordered a grant of twelve hundred acres.

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[1] Petition read in Council 9th March, 1808.

William Hands: Has been a resident in Upper Canada nineteen years; wishes to become a settler, and prays for a grant of waste lands of the Crown in the Western District. Ordered a grant of twelve hundred acres.

George Meldrum: Prays for a grant of twelve hundred acres of land. Ordered to be granted.

James Fraser: Prays for a grant of twelve hundred acres of land. Ordered to be granted.

William Park: Prays for a grant of twelve hundred acres of land. Ordered to be granted.

Walter Roe: Prays for a grant of twelve hundred acres of land. Ordered to be granted.

J. S.

4th June, 1796.

Council Chamber, Newark.

Present: His Excellency John Graves Simcoe, Esq.; The Honourables Alex'r Grant, and Æneas Shaw.

Petition read from:

Richd. Duncan, Esq. and Thos. Fraser, Esq., respecting an order they obtained dated the 13th July, 1793, for a large tract of land for themselves and associates. They pray for a further specification of the terms on which they obtained the above tract. Resolved, that the petitioners be informed the Proclamation issued by His Excellency Lieutenant Governor Simcoe, the 7th of February, 1792, is sufficiently explanatory of the terms on which townships or tracts of land are granted, as necessary to prevent those inconveniences which have heretofore arisen in many of the claims in America, from granting excessive quantities of land to particular persons.

Read a letter from the Honourable Richard Cartwright, (dated Queenstown 25 May, 1796), stating that he received an Order of Council respecting his petition for lands in right of his father. In answer he observes that tho' his father never held any commission, yet he has the certificates to produce shewing that he received five hundred acres of land under His Majesty's Instructions in 1783. Should this however appear not sufficient to warrant a grant of 1500 acres as an officer, he trusts the circumstances stated in the petition will induce His Excellency and the Council to add seven hundred acres to the quantity already obtained, in order to make up twelve hundred acres. Ordered a grant of seven hundred acres.

Thomas Allison, Captain in His Majesty's 5th Regt. of Foot. States he made application to His Excellency in Council for two thousand acres of land at Long Point and Kettle Creek, and obtained on the 10th July, 1794, grant for 1000 acres at Kettle Creek; and was recommended at the same time to stand among the first applicants for lands at Long Point in order to receive the other 1000 acres when any settlement should be made there, which having now taken place, induces him to renew his application for obtaining the same, and further prays that as soon as Kettle Creek will be surveyed to have a ticket of location for the lands granted to him there. Ordered that it be granted.

Alexander Campbell, Esq. States that having received a sanction from His Excellency in Council to settle thirty families in the Township of Kitley, and has been at a considerable expense; but that he could not wholly fulfil his original expectations for want of the lands being surveyed; that through his means nineteen settlers have been set down on lands in the said township and twenty-nine are ready as soon as the lands are to be given out under proper survey. Petitioner having a large family of children, ten in number now living, and being desirous to settle them among the people in the said township, prays that each of his children may have a location of land there. Ordered to be referred to the Surveyor General, so that the lands to which his family is entitled may be located in Kitley.

Robert Richardson: Proposes to become a settler in this Province and prays for such quantity of land as His Excellency may think proper. Ordered that the petitioner shall receive twelve hundred acres. Referred to the Surveyor General for location.

Major Edward Jessup attended and prayed to be confirmed in the lands he originally applied for. Resolved that Major Jessup be granted the fall which he terms the second fall on the River Petite Nation and which appears to be in Mr. Rankin's survey named the fourth fall. Also, resolved that three thousand eight hundred acres be granted Major Jessup in the Township of Cambridge as near as may be practicable to the second fall. Resolved that 1400 acres be granted to Lieutenant Edward Jessup as near as may be practicable to the second fall. Resolved that the lot on which the fifth fall in Mr. Rankin's plan is placed, be not included in Major Jessup's grant.

Terence Smith, on behalf of himself and brother, with the Surveyor General's report. Mr. Smith is to be informed that the lands he requests cannot be appropriated till they are surveyed. The Surveyor General to take care they are not granted to other applicants.

J. S.

Saturday, 18th June, 1796.

Council Chamber, at the Garrison at York.

Present: His Excellency John Graves Simcoe, Esq., The Honourables Alexander Grant and Æneas Shaw.

John McGill, Esq., was sworn in as an Executive Councillor Extraordinary, agreeably to the following Mandamus:

GEORGE R.—

To Our Right Trusty and Well-beloved Guy Lord Dorchester, K.B., Our Captain General and Governor in Chief in and over Our Province of Upper Canada, in America, or in his absence to Our Lieutenant Governor or Commander in Chief of Our said Province for the time being. Right Trusty and Well-beloved: We greet You well! We being well satisfied of the Loyalty, Integrity and Ability of Our Trusty and Well-beloved Captain John McGill and David Smith, Esq. have thought fit hereby to signify Our Will and pleasure that forthwith upon receipt of these Presents You swear and admit them the said Captain John McGill and David Smith to be of Our Executive Council in Our Province of Upper Canada in America, to Act as Members of such Council respectively at the times, on the occasions and upon the Summons hereinafter mentioned, and not otherwise, that is to say, provided nevertheless that the said Captain John McGill and David Smith shall not, nor shall either of them Act as Members, or a Member of our said Executive Council, save only and except at such time or times and upon such occasion or occasions respectively when they shall respectively be especially summon'd to attend as Members of such Council by Our Governor, or the Person having the Government of our said Province for the time being, nor shall either of them by Virtue of this Appointment and of their being so sworn and admitted as aforesaid be entitled to any Salary as Members of Our said Executive Council; And it is our further will and Pleasure that the Special Appointment and Admission of the said Captain John McGill and David Smith respectively in manner aforesaid shall be clearly and distinctly expressed in the Minutes of our said Council upon the swearing and admission of the said Captain John McGill and David Smith, respectively, And for so doing this shall be yr. Warrant, and so We bid You heartily farewell!

Given at our Court at Saint James the second day of March, 1796, in the thirty-sixth Year of Our Reign.

By His Majesty's Command. (Signed) Portland.

27th June, 1796.

Council Chamber, Garrison at York.

Present: His Excellency John Graves Simcoe, Esq.; The Honourables Peter Russell, Æneas Shaw, and John McGill.

David William Smith, Esq. was sworn in as Executive Councillor Extraordinary agreeably to the Mandamus entered June 18, 1796. His Excellency left the Council, and the above Members with the Hon. D. W. Smith formed themselves into a Committee agreeably to His Excellency's commands when the following letter was read by the Clerk:

York, June 26, 1796.

Sir, I am directed by His Excellency the Lieutenant Governor to transmit an extract of a letter from His Grace the Duke of Portland to His Excellency to be laid before the Council including an extract from the Council of Lower Canada.

I am also for the further information of the Council commanded to enclose to you, to be laid before them, the copy of a patent as issued by the Government of Lower Canada, and transmitted by Mr. Secretary Coffin to the Lieutenant Governor in a letter dated March 8th, 1796, a copy of which is herewith sent.

His Excellency desires the Council will be pleased to form a Committee and to take the subject-matter into their consideration.

I am, Sir,
Your most obedient and most Humble Servant,
E. B. Littlehales.

To J. Small Esq.

Clerk of the Coucil.

No. 1. Extract of a Dispatch to Lieutenant Governor Simcoe, from His Grace, the Duke of Portland, One of His Majesty's Principal Secretaries of State, &c., dated, Whitehall 6th January, 1796.

"I trust that in the reservations mentioned in the first of these letters to have been made in respect of lands granted in the County of Lincoln, previous to the Canada Act, care has been taken to give them as great a corresponding value with the lands in respect of which they are made, as the nature of the case admits of, which certainly takes away all advantages arising from intermixture of the reservations with the grants. It is not possible to judge how far the plan transmitted, or indeed how far any given plan may operate to this effect, as the question, where grants have been made previous to the Canada Act, and where consequently the approved diagram cannot take place, must always be determined by the local situation of the grants and the reservations to be made. It is sufficient therefore to observe that in these cases, the principle I have laid down must be always kept in view in making the reservations.

"Upon an attentive perusal of No. 26 and its inclosures respecting the Table of Fees on Grants of Land, I do not see any material objection to the one adopted, except that it is desirable there should be precisely the same fees taken in both Provinces. And care must be taken, that the amount of the fees for any given quantity does not exceed the ratio laid down in the Nova Scotia Table, which I conceive it will do in the present Table of Upper Canada, if the additional fees contained in the third Resolution of the Council Minutes of the 21st of July, 1795 are suffered to stand, for the Nova Scotia Table is given as a guide, quoad its amount of fees, leaving the distribution of them to your discretion, aided by your Council. I inclose you an extract from the Council Minutes of Lower Canada, containing the Table of Fees for that Province, and I take this opportunity to observe, that it has been represented to me, that His Majesty's bounty in making grants will be abundantly liberal after charging the grantees with expenses of surveying and setting out their lands, as well as with the amount of the fees for making the grants.

"This being the case there seems no good reason why Government should be charged with the expense of surveys setting out, nor why the waste lands of the Crown should not be given away at least without incurring a national expense, and as measures are taken in Lower Canada for relieving the public from such charges, I expect the same thing will be done in your Government. You will at the same time consider, whether this idea may not be extended beyond a mere indemnification to Government, on perusing the within copy of my letter to Lord Dorchester on this subject; and you will consider how far my suggestions are applicable to the Upper Province." A true copy of the Dispatch. (Signed) E.B.L.

No. 2 Extract: "With respect to the establishment of the Table of Fees, they have paid particular attention to that part of Mr. Secretary Dundas's letter, communicated by Your Lordship, which recommends that a reasonable and proportionate fee might be reserved to the Attorney General by deducting somewhat from the fees of other officers, as stated in the Table of Fees of His Majesty's Province of Nova Scotia, and beg leave to submit the following Table, which is framed conformably to such directions as nearly as may be, consideration being had of the difference of the plan to be adopted in making the grants, and with the addition of the Attorney General's fee, and also of a fee to the Clerk of the Council, which is not specified in the Nova Scotia Table, amounts in the whole to the same sum to be divided among the several officers of the Crown, for granting 1000 acres, as is allowed by the Nova Scotia Table.

The Table

The Great Seal, The Governor, 10s.; Attorney General, 10s.; Surveyor, 15s.; Secretary, 10s.; Clerk of the Council, 10s.; Auditor, 6s. 8d.; Register, 5s. A total of £3, 6s. 8d.

"And the Committee are further humbly of opinion that as the expediency of disposing of the vacant lands of the Crown to one or more persons, who are usually nominated leaders, seems to have been admitted by His Majesty's Ministers, and as the payment of the fees to the several officers will be probably discharged in the gross by such leaders, there is no such necessity of drawing out any other Table than the one herein proposed, which is calculated upon a grant of 1000 acres, and may be adopted in adequate proportions to any accumulated grant, or reduced if it should be thought advisable to take out a grant for a smaller quantity." (Signed) E.B.L.

Quebec, 8th March, 1796.

[No. 4.]

"Sir, Lord Dorchester commands me to inclose for your information a copy of the diagram [1] and first grant of the waste lands of the Crown made in Lower Canada in conformity to the Act of the thirty-first of the King, and of the Royal Instructions, together with a Table of the fees paid by the grantees.

"The better to secure the reserves for the Crown and Church, the Attorney General recommended that the patent shall be detained in the Secretary's office, and that an authenticated copy should be made legal evidence; a Bill to that effect was accordingly prepared by him, and passed with some alterations, copy of which is also inclosed, accompanied with two other Acts of the present Sessions, to which His Lordship has given His Majesty's assent.

I have the honour to be, &c. (Signed) Thos. Aston Coffin.

"To Major General Simcoe,
Lieutenant Governor of
Upper Canada."

–(Signed) E.B.L.

The Committee of the Executive Council of Upper Canada having maturely considered these papers which have been laid before them by Your Excellency's directions on the subject of the fees allowed to be taken by the officers of the Crown on all grants of land, and observing that Your Excellency is confined to the Nova Scotia Table only, as the standard of the quantum, without being required to follow implicitly the Table of Fees established in Lower Canada, or the principles on which it was formed, they beg leave to state that by the Nova Scotia Table the quantum to be taken on a grant of 1000 acres appears to be £4.1.8. as under:

Governor, on all grants: 2nd Great Seal, 10s.; 1st License of Occupation, 10s. = £1.0.0.

Secretary: License of Occupation, 5s.; Affixing the Great Seal, £1.10. = £1.15.0.

Surveyor General, 15s.

Auditor on all grants, 6s. 8d.

Register on 1000 acre grant, 5s., a total of £4.1.8., and not £3.6.8. as stated in the Quebec Table. But as neither the Attorney General nor the Clerk of the Council have been included in the Nova Scotia Table, the Committee beg leave to recommend to Your Excellency to adopt part of the distribution in the Quebec Table by giving the Secretary's fee on the license of occupation to the Clerk of the Council and the half of his other fees to the Attorney General, agreeable to the Resolution of Council on the 21st of July, 1795, which appears from the extract of the Duke of Portland's letter (which Your Excellency has done them the honour to communicate) to have been approved. Upon this principle, and the ratio of the Nova Scotia Table to which Your Excellency is confined, the distribution of the fees to be taken on all grants will be as follows: On grants under 100 acres: Governor, £1; Secretary, 5s.; Chief Surveyor of Lands, 5s.; Attorney General, 5s.; Auditor, 6s. 8d.; Clerk of the Council, 5s.; Register, 2s. 6d.; a total of £2.9s.2d.

On grants of 100 acres and not exceeding 500 acres:

Governor, £1; Secretary, 10s.; Attorney General, 10s.; Chief Surveyor of Lands, 10s.; Auditor, 6s. 8d.; Clerk of the Council, 5s.; Register, 2s. 6d.; a total of £3.4s. 2d.

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[1] Diagram had been detached from original letter and not restored to fyle.

On grants above 500 and not exceeding 1000 acres:

Governor. £1; Secretary, 15s.; Attorney General, 15s.; Chief Surveyor of Lands, 15s.; Auditor, 6s. 8d.; Clerk of the Council, 5s.; Register, 5s.; a total of £4. 1s. 8d.

On all grants exceeding 1000 acres:

Governor, for every 1000 after the first 1000 acres, 5s.; Secretary, first 1000, 15s.; every 1000 acres after, 2s. 6d.; Attorney General, do. 15s.; for every 1000 acres after, 2s. 6d.; Register for every 1000, to amount of 20,000, 1s.; Register for recording a township, 2s.; Secretary for every right exceeding 20 in number, 2s. 6d.; Attorney General for do., 2s. 6d.; Chief Surveyor of Lands, for do., 5s.

The Committee upon the presumption that the Deputy Surveyor of Woods and Deputy Surveyors of Lands are meant by the Provincial Land Officers of the Crown mentioned by N.B. as not included in the Nova Scotia Table, takes the liberty of adopting the Resolution of Council 21st July,1795 referred to in His Grace the Duke of Portland's letter mentioned above as the standard of fees to be taken by those officers for their respective services in the Land Granting Department being as follows:

Deputy Surveyors of land, for every search, 1s. 6d.; every assignment or description, 1s.; Deputy Surveyor of Woods, for each certificate, 1s.

And as the grantees of land can never have communication with the Deputy Surveyor of Woods, the Committee beg leave to recommend that the Secretary of the Province be directed to charge his fee to them, with the other fees, and receive it upon issuing the patent, and to collect all the fees coming to the officers of Government upon every patent issued, and account with them respectively for the same on the 30th June and 31st December in each year, charging to each 2½ per cent. for his trouble.

The above report was read in Council on the 9th of July, 1796. His Excellency being present, approved and confirmed the same. (Signed) J. G. Simcoe.

J. SMALL, C.E.C.

28th June, 1796.

Council Chamber, Garrison at York.

The Committee met according to adjournment. Present: The Honourables Peter Russell, Chairman; Æneas Shaw, John McGill, D. W. Smith.

The Committee of Council took into consideration by His Excellency's desire the petitions of sundry applicants in waiting, viz.:

Francis Drouillard, Detroit: Stating that he has been a resident of Detroit thirty-eight years in the course of which time he has served many campaigns particularly from the year 1763 to 1765 in the Indian War, that he has a wife and ten children, and praying for such grant of land as His Excellency may think proper. Several certificates from Col. McKee, Mr. Baby, and other respectable gentlemen were presented with this petition giving the petitioner a most excellent character for loyalty and services and confirming everything set forth therein, also a commission from Governor Hamilton appointing him a Lieut. of Militia in 1777. Recommended for 1200 acres of land, or that such quantity as he may have already been granted be made up to that amount; also 200 acres of land for Dennis Drouillard, his son.

William Gage: Stating that he had a promise from Col. Hunter of 900 acres of land, and that he has only received 600 acres and praying for a further grant. Recommended for 50 acres to make up his own and family land, and when his eldest son is of age and petitions, he may have 200 acres for himself.

John Dennis: Served the King in the last war, has been a loyalist all his life, has resided nine years in Nova Scotia, has brought with him into this Province a wife and four children, having been promised a lot adjoining Isaac Devine's on the Humber, if he returned into this Province within twelve months. Prays for that lot and 1000 acres in addition. Recommended for such quantity of land as His Excellency may have originally judged he merited, and that the lot promised him on the Humber may be part of the grant, if His Excellency is not under a previous promise to Mr. Wilson.

Thos. Edwards: Has been eleven years in the vicinity of Detroit, has a wife and eleven children and never drawn any lands. Was born in England and has been a farmer all his life-time. Prays for land on the River La Tranche. In consideration of his large family, recommended for 400 acres.

John Collins: Served in the 71st Regt., has received 200 acres and prays for 100 acres more. Not producing his discharge from the 71st Regt. prayer rejected.

Josiah Lockwood, a loyalist: Two of his sons served in the Royal Volunteers at New York. Has a wife and six children, His Excellency had the goodness to direct that he should receive 600 acres in Flamborough, that having never received any Order of Council for the same, prays that he may be confirmed in the 600 acres. Recommended for 400 acres in Flamboro.

Benjamin Lockwood: Wishes to become an inhabitant of this Province. Prays for a grant of land. Recommended for 200 acres near his father's lot.

John Dunbar, appeared personally for confirmation of the prayer of the petition presented in Council 18th August, 1795, for the mill and scite which he holds near Fort Erie. Recommended to be granted, if not already granted, together with an acre in the vicinage.

John McCall, appeared personally, reference being had to the late Order of Council to Captain Haggarty's petition with his own. Recommended that Mr. McCall and his associates may be accommodated at Long Point as near to his and their wishes as the Surveyor General can find vacancies for them.

Robert Young: Received 400 acres on the Carrying Place at the head of the Bay of Quinté. Prays for a further grant. Recommended that 1200 acres be granted Mr. Young, and 200 acres to each of his grown sons, Robert and Reuben, but the location left to the Surveyor General who will consider any former grant as part of the quantity now recommended.

Joseph Clark: Joined the British Forces in the year 1776. Prays for 1000 acres of land. Recommended for 400 acres.

Mathias Marsh: Has three sons, Archibald, William, and Edmund, and three daughters, that he has been in the Province 8 years and has received 100 acres only. Prays for lots Nos. 35 and 34 in the Township of Murray with the broken fronts. Reference being had to a letter from the Clerk of the Council to Mr. Baker dated June 22, 1793, recommended that the petitioner be assigned No. 35 (if vacant) in the Township of Murray, in addition to the 100 acres already granted him.

Asa Weller, a loyalist, lately arrived in the Province: Has a wife and six children. States that His Excellency has been pleased to approve his having a lot of 100 acres on the south west side the Carrying Place Presq'ile de Quinté. Prays for a grant of the same and 100 acres more of the said lot; also such quantity adjoining Presq'isle Harbour, and No. 4 in front of the Township of Murray, with the broken fronts for his wife, the daughter of a loyalist. Reference being had to a letter from the Clerk of the Council to Mr. Baker dated 22 June, 1793, recommended that the petitioner may be assigned No. 4 in the Township of Murray in front of first concession as desired, if vacant, and that 200 acres more be granted his wife.

Bernard Carey, a loyalist: Prays for land and a town lot in York. Recommended for 200 acres in the County of York, and a back town lot; and referred to the Surveyor General.

Roger Bates: Lately arrived in this Province from Vermont, with a wife and six children exclusive of his eldest son, is desirous to reside in the Province, and being in a condition to improve and cultivate a large tract of land prays for 1200 acres. His petition accompanied by recommendations from the most respectable inhabitants of Vermont, recommended for 600 acres in the Township of Clarke.

Adha Bates: Lately come from Vermont, with a wife and two sons. Prays for 1200 acres of land. Recommended for 200 acres.

Thos. Saunders, prays for 200 acres on Patterson's Creek. Recommended for 200 acres on Yonge Street, and referred to the Surveyor General.

John Burk, settled on lot No. 13 first con., Township of Darlington. To be reserved for the petitioner until he produces to the Surveyor General Mr. Peirce's permission to settle on the said lot or until the Township of Darlington to laid open, in which case the petitioner to have a grant of the lot prayed for.

J. SMALL.

Thursday, 24th November, 1796.

Council Chamber, Newark.

Present: Honourables Peter Russell, Administering the Government, and D. W. Smith.

The Honourable John Elmsley, took the Oaths of Allegiance, Supremacy, and Abjuration, and subscribed the Test, and also took the oath for the due execution of his office, as an Executive Councillor.

ADJOURNED. J. SMALL, C.E C.

APPENDIX I.

Appointment of John Graves Simcoe, to be Lieutenant Governor of Upper Canada.

(12 Sept. 1791)

GEORGE R.

GEORGE THE THIRD by the Grace of God of Great Britain, France and Ireland, King, Defender of the Faith, etc.:

To our Trusty and Well beloved John Graves Simcoe, Esquire,—Greeting.[1]

We, reposing especial trust and confidence in your loyalty, integrity and ability, do by these presents constitute and appoint you to be Our Lieutenant-Governor of our Province of Upper Canada in America. To have, hold, exercise, and enjoy the said place and office during our Pleasure, with all rights, privileges, profits, perquisites and advantages to the same belonging or appertaining and, further, in case of his death or during the absence of Our Captain General and Governor in Chief of Our said Province of Upper Canada, now and for the time being, We do hereby authorize and require you to exercise and perform all and singular the powers and directions contained in Our Commission to Our said Captain General and Governor in Chief according to such instructions as he hath already received from Us, and such further Orders and Instructions as he or you shall hereafter receive from Us, and we do hereby command all and singular Our Officers, Ministers and loving subjects in Our said Province, and all others whom it may concern, to take due notice hereof and to give their ready obedience accordingly. Given at Our Court of St. James's, the Twelfth day of September, 1791, in the Thirty-first year of Our Reign.

(Signed) HENRY DUNDAS.

By His Majesty's Command.

APPENDIX II

COLONEL SIMCOE'S ARRIVAL AT QUEBEC

From J. G. Simcoe to Henry Dundas [2]

Quebec, Novr. 12th, 1791.

Sir,

Captn Murray meaning to sail this evening for Halifax I do myself the honour of informing you that the Triton arrived early on the morning of the eleventh in the Harbour of Quebec.

I propose writing by a Merchant Vessel which is to sail on the fifteenth but am unwilling to risk the Notification of my safe arrival on the possibility of the Vessel's losing her passage. I have the honour to inform you that I delivered the letter which his Majesty was pleased to entrust to me for his Royal Highness Prince Edward & I have the pleasure to add that I found the Prince in perfect Health.

I have the honour to be with the most
perfect Respect,

Your most Obedt & most faithful &c.

J. G. SIMCOE.

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[1] Ontario Archives, 1906, p. 161.

[2] Simcoe Papers pp. 77-79 Ont. His. Soc. 1923.

To the Right Honble. Henry Dundas, &c., &c.

Endorsed:—Quebec, 12th Novr, 1791. Lt. Govr. Clarke (sic) R. 30 Dec. Read by the King.

FROM J. G. SIMCOE TO SIR GEORGE YONGE

Private

Quebec, Novr. 12, 1791.

Dear Sir,

I flatter myself it will give you pleasure to learn that after a blustering passage, we anchored safely at Quebec on the 11 November. I have scarcely had time to look about me as yet, having been occupied in getting our baggage on shore as Captain Murray of the Triton is in haste to proceed towards Halifax lest he should be frozen in.

I understand that the Americans have made an Expedition to take Post at the Miamis that flows into the Erie and the Sandusky. They have acted most wisely in the carrying on of these Military Operations against the Savages. It has been a Succession of Expedition after Expedition, the one following the Return of the preceding one, and the present Force is said to consist of 4,000 Troops. I am convinced that my System is just to prevent War by the Appearance of Force, and by its Concentration. I do therefore most earnestly hope that the Companies, a British Regiment and a good Field Train, will be established in my intended Capital. It is understood that a Thousand men will be left in the American Post at the Miamis.

I have written most strongly to Mr. Dundas to desire that I may have a Letter of Service as Colonel in America. I hope it will be expressed generally, though the Prince's being here has prevented me for the present from obtaining the rank of Brigadier General: there is no Reason that I know why I should be unable of acting till such time as my Corps arrives from England.

I would not waste an hour, much less Months. I hope that you have been good enough to have forwarded the Letter explanatory of my Rank, &c. &c. which you sent to me at Weymouth, if not, may I beg that it may be sent by the first Opportunity.

If, by the Appearance of Force and the diffusion of the pay of our Troops, Peace shall be preserved in Upper Canada for five years, I am confirmed by those with whom I have conversed in this Country that it will sustain itself. My wife joins me in best wishes to Lady Yonge, and I am,

Dear Sir George,

Your ever obliged,

J. G. SIMCOE.

To Sir Geo. Yonge.

FROM LIEUT. GOVERNOR CLARKE TO HENRY DUNDAS

No. 10.

Quebec, 12th November, 1791.

Sir,

I have the honor to acquaint you that His Majesty's Ship Triton, with Colonel Simcoe on board, arrived here yesterday, by whom I received a new Commission appointing me Lieutenant Governor of Lower Canada, with the undermentioned dispatches addressed to Lord Dorchester vizt. No. 1, 2, 3 & 4 letters of the 16th September last, accompanied by the Act relative to the Government of this Country passed in the last Session of Parliament and a Warrant authorizing the Governor of the Province of Quebec to fix and declare the Commencement thereof—also a Commission under the Great Seal revoking Lord Dorchester's former Commission as Governor of the Province of Quebec and vesting him with the chief Government of Upper and Lower Canada, likewise four separate setts of instructions under the Royal Sign Manual, together with other inclosures in said letters referred to—further a letter of the 15th September inclosing an order of His Majesty in Council for the dividing the province of Quebec into two distinct Governments and two Circular letters of the 8th & 21st September with their accompanying papers.

I have the honour to be with great respect, Sir,

Your most obedient and most faithful humble Servant,

ALURED CLARKE.

The Honble. Henry Dundas.

Endorsed:—Quebec, 12 Novem., 1791. Lt. Govr. Clarke. No. 10. R. 3d Jan., 1792.

FROM J. G. SIMCOE TO HENRY DUNDAS

Quebec, Novr. the 13th, 1791.

Sir:

I do myself the honour of informing you that I arrived in the bason of Quebec early on the morning of the eleventh. The Triton met with some very heavy Gales in her passage, particularly when in the River St. Lawrence but which she weathered without the slightest damage evidently owing to the professional knowledge & foresight of Captn Murray. She sailed this morning for Halifax.

I delivered Ld Dorchester's Commission & the Dispatches, Sr. John Johnson's Commission & his own to Major General Clarke—I beg leave to inform you that I delivered the Letter which his Majesty was pleased to entrust me with to his Royal Highness Prince Edward & I have the pleasure to add that I found his Royal Highness in perfect Health.

I have the honour to be with the utmost Respect, Sir,

Your most obt & most humble St.

J. G. SIMCOE.

to the Rt. Honble Henry Dundas.

Endorsed:—Quebec, 13th Nov., 1791. Lt. Govr. Simcoe, R. 3d January, 1792.

APPENDIX III

Oaths administered to Members of the Executive Council and Officials of Upper Canada (9th July, 1792).[2]

Every Councillor must take the oath of allegiance, supremacy, and abjuration, and subscribe the test; after which he must take the following oath of office.

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[2] Extracted from Original Minutes, Land and State Book "A" pp. E, F and W.

OATH OF OFFICE

You do swear that you faith and true allegiance bear unto His Most Sacred Majesty King George the Third, and to his heirs and successors, and shall be true and faithful to His Excellency, as he is commissioned Captain General and Governor in Chief in and over this His Majesty's Province, and that you will in the place and office of his Majesty's Councillors of this Province, well and faithfully serve His said Majesty and promote the good of his Majesty's affairs with your best advice and counsel; You shall with your best ability defend this Province from all foreign, noxious and intestine insurrections; You shall not countenance or conceal any plot or seditious conspiracy, or any treasonable or seditious speeches against His said Majesty, his heirs or successors, or His said Excellency, but you shall give speedy notice thereof unto His said Excellency, or to some Member of the Council; the secret debates of the Council you shall not reveal directly or indirectly; all which you shall, to the utmost of your ability, perform. So help me God.

OATH OF ALLEGIANCE

I, A.B. do sincerely promise and swear, that I will be faithful and bear true allegiance to His Majesty King George; so help me God.

OATH OF SUPREMACY

I, A.B. do swear, that I do from my heart abhor, detest and abjure as impious and heretical, that damnable doctrine and position, that princes excommunicated or deprived by the Pope, or any authority of the See of Rome, may be deposed or murdered by their subjects, or any other whatsoever. And I do declare, that no foreign prince, person, prelate, state, or potentate, hath, or ought to have, any jurisdiction, power, superiority, pre-eminence or authority, ecclesiastical or spiritual, within this realm; so help me God.

OATH OF ABJURATION

I, A.B. do truly and sincerely acknowledge, profess, testify, and declare in my conscience, before God and the world, that our Sovereign Lord King George is lawful and rightful King of this realm, and all other His Majesty's dominions thereunto belonging. And I solemnly and sincerely declare, that I do believe in my conscience, that not any of the descendants of the person who pretended to be Prince of Wales during the life of the late King James the Second, and since his decease pretended to be, and took upon himself the style and title of King of England, by the name of James the Third, or of Scotland by the name of James the Eighth, or the style and title of King of Great Britain hath any right, or title whatsoever, to the Crown of this realm, or any other the dominions thereunto belonging. And I do renounce, refuse and abjure any allegiance or obedience to any of them. And I do swear, that I will bear faith and true allegiance to His Majesty King George, and him will defend to the utmost of my power, against all traitorous conspiracies and attempts whatsoever which shall be made against his person, crown, or dignity. And I will do my utmost endeavour to disclose and make known to His Majesty and his successors, all treasons and traitorous conspiracies which I shall know to be against him or any of them. And I do faithfully promise to the utmost of my power, to support, maintain and defend the succession of the Crown against the descendants of the said James, and against all other persons whatsoever; which succession, by an Act Intituled, An Act for the further limitation of the Crown, and better securing the rights and liberties of the subject, is and stands limited to the Princess Sophia, Electress and Duchess Dowager of Hanover and the heirs of her body being protestants.

And all these things I do plainly and sincerely acknowledge and swear according to these express words by me spoken and according to the plain and common sense and understanding of the same words without any equivocation, mental evasion or secret reservation whatsoever. And I do make this recognition, acknowledgment, adjuration, renunciation and promise, heartily, willingly and truly upon the true faith of a Christian; so help me God.

THE TEST

I, A.B. do declare that I do believe that there is not any transubstantiation in the Sacrament of the Lord's Supper or in the elements of bread and wine, at or after the consecration thereof by any person whatsoever. (Vide page 72.)

APPENDIX IV

EXECUTIVE COUNCIL

Lieutenant-Governor	His Excellency John Graves Simcoe.
Members	Chief Justice William Osgoode. Honourable James Baby. " Peter Russell. " Alexander Grant. " AEneas Shaw. " William Robertson (resigned, 1792). " John McGill (Extraordinary). " David William Smith (Extraordinary). " John Elmsley.
Clerk	Capt. Edward B. Littlehales, *pro tem*, 9th July, 1792. John Small, Esquire.
Confidential Clerk	Richard B. Tickell.

APPENDIX V

LEGISLATIVE COUNCIL

Speaker: Honourable William Osgoode.
Clerk: James Clark, Esquire.
Honourable James Baby.
" Richard Cartwright, Jr.
" Richard Duncan.
" Alexander Grant.
" Robert Hamilton.
" John Munro.
" William Osgoode.
" Peter Russell.

APPENDIX VI

LEGISLATIVE ASSEMBLY, 1792-1794

Speaker	Honourable John McDonell.
1st Glengarry	Hugh McDonell.
2nd Glengarry	Hon. John McDonell (Speaker).
Stormont	Jeremiah French.
Dundas	Alexander Campbell.
Grenville	Ephraim Jones.
Leeds-Frontenac	John White (Attorney General).
Addington-Ontario	Joshua Booth.
Prince Edward	Peter Van Alstine.
Lennox, Hastings, Northumberland	Hazelton Spencer.
Durham, York and 1st Lincoln	Nathaniel Pettit.
2nd Lincoln	Benjamin Pawling.
3rd Lincoln	Isaac Swayzie.
4th Lincoln and Norfolk	Parshall Terry.
Suffolk and Essex	Hon. David William Smith. William Macomb. Francois Baby.
Clerk of the House	Angus McDonell.
Sergeant-at-Arms	George Lawe.
Chaplain	Rev. Robert Addison.

APPENDIX VII

EXECUTIVE OFFICERS

Secretary and Registrar	William Jarvis, Esquire.
Receiver-General	Honourable Peter Russell.
Attorney General	John White, Esquire.
Clerk of the Crown	David Burns, Esquire.
Surveyor General	Honourable David William Smith.
Commissary of Stores	Captain John McGill.

JUDICIARY

Chief Justice	Honourable William Osgoode.[1] Honourable John Elmsley.
Judge, Court of Common Pleas	Honourable Wm. Dummer Powell.

APPENDIX VIII.

FORMATION OF THE OLD DISTRICTS

PROCLAMATION

(24th July, 1788)

DORCHESTER, G

GEORGE the THIRD by the grace of God, of Great Britain, France, and Ireland, King, Defender of the Faith, and so forth. To all our loving subjects, whom these presents may concern, greeting:[2]

Whereas our province of Quebec stands at present divided only into two districts, and by virtue of two certain acts or ordinances, the one passed by our governor and the legislative council, in the twenty-seventh year of our reign, and the other in the present year, provision is made for forming and organizing one or more new districts. Now, therefore, know ye, that our governor of our said province, by the advice and consent of our council of our said province, and in pursuance of the acts and ordinances aforesaid, hath formed and doth hereby form the several new districts hereinafter described and named, to wit: the district of Luneburg, bounded on the east by the eastern limit of a tract lately called or known by the name of Lancaster, protracted northerly and southerly as far as our said province extends, and bounded westerly by a north and south line, intersecting the mouth of the river Gananoque, now called the Thames, above the rifts of the Saint Lawrence, and extending southerly and northerly to the limits of our said province. therein comprehending the several towns or tracts called or known by the names of Lancaster, Charlottenburg, Cornwall, Osnabruck, Williamsburg, Matilda, Edwardsburg, Augusta, and Elizabethtown; and also one other district to be called the district of Mecklenburg, extending within the north and south bounds of our said province, from the western limits of the said district of Luneburg, as far westerly as to a north and south line, intersecting the mouth of a river now called the Trent, discharging itself from the west into the head of the bay of Quinty, and therein comprehending the several towns or tracts called or known by the names of Pittsburg, Kingstown, Ernestown, Fredericksburg, Adolphustown, Marysburg, Sophiasburg, Ameliasburg, Sydney, Thurlow, Richmond, and Camden; and also one other district to be called the district of Nassau, extending within the north and south bounds of our said province, from the western limit of the last mentioned district, so far westerly as to a north and south line, intersecting the extreme projection of Long Point into the lake Erie, on the northerly side of the said lake Erie; and also one other district to be called the district of Hesse, which is to comprehend all the residue of our said province in the western or inland parts thereof, of the entire breadth thereof, from the southerly to the northerly boundary of the same; and also one other district to be called the district of Gaspe, and to comprehend all that part of our said province on the southerly side of Saint Lawrence, to the eastward of a north and south line, intersecting the northeasterly side of Cape Cat, which is on the southerly side of the said river; of which all our loving subjects are to take due notice, and govern themselves accordingly.

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[1] Appointed Chief Justice, Lower Canada, 1794.

[2] Ontario Archives, 1906, pp. 157, 158.

In testimony whereof, we have caused these our letters to be made patent, and the great seal of our said province to be hereunto affixed. Witness our trusty and well beloved GUY, LORD DORCHESTER, captain general and governor in chief of our said province, at our castle of Saint Lewis, in our city of Quebec, the twenty-fourth day of July, in the year of our Lord one thousand seven hundred and eighty-eight, and of our reign the twenty-eighth.

GEO. POWNALL, Sec'y.

APPENDIX IX.

Conditions of Land Settlement

PROCLAMATION [1]

7th February, 1792.

His Excellency JOHN GRAVES SIMCOE, Esquire, Lieutenant Governor and Commander in Chief of the said Province, and Colonel Commanding His Majesty's Forces, &c.

To such as are desirous to settle on the Lands of the Crown in the Province of Upper Canada:

Be it known to all concerned, that His Majesty hath by His Royal Commission and Instructions to the Governor, and in his absence to the Lieutenant Governor or Person administering the Government for the time being of the said Province of Upper Canada, given Authority and Command to grant the Lands of the Crown in the same by Patent under the Great Seal thereof; and it being expedient to publish and declare the Royal Intention respecting such Grants and Patents, I do accordingly hereby make known the Terms of Grant and Settlement to be:

FIRST. That the Crown Lands to be granted be parcel of a Township: If an Inland Township, of Ten Miles square, and if a Township on navigable waters, of Nine Miles in Front and Twelve Miles in Depth, to be run out and marked by His Majesty's Surveyor or Deputy Surveyor General, or under his Sanction and Authority.

SECOND. That only such Part of the Township be granted as shall remain, after a Reservation of one seventh Part thereof, for the Support of a Protestant Clergy, and one other seventh Part thereof, for the future disposition of the Crown.

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[1] Ont. Archives pp. cv, cvii, 1905.

THIRD. That no Farm Lot shall be granted to any one Person which shall contain more than Two Hundred Acres; yet the Governor, Lieutenant Governor or Person administering the Government, is allowed and permitted to grant to any Person or Persons such further Quantity of Land as they may desire, not exceeding One Thousand Acres over and above what may have been before granted to them.

FOURTH. That every Petitioner for Lands make it appear, that he or she is in a Condition to cultivate and improve the same, and shall besides taking the usual Oaths, subscribe a Declaration (before proper Persons to be for that purpose appointed) of the Tenor of the Words following, viz. "I A. B. do promise and declare that I will maintain and defend to the utmost of my Power the Authority of the King in His Parliament as the supreme Legislature of this Province"

FIFTH. That Applications for Grants be made by Petition to the Governor, Lieutenant Governor, or Person administering the Government for the time being, and where it is advisable to grant the Prayer thereof a Warrant shall issue to the proper Officer for a survey thereof, returnable within Six Months with a Plot annexed, and be followed with a Patent granting the same, if desired, in Free and Common Soccage, upon the Terms and Conditions in the Royal Instructions expressed, and herein after suggested.

SIXTH. That all grants reserve to the Crown all Coals, commonly called Sea Coals, and Mines of Gold, Silver, Copper, Tin, Iron, and Lead; and each Patent contain a Clause for the Reservation of Timber for the Royal Navy of the Tenor following:

"And provided also, that no Part of the Tract or Parcel of Land hereby granted to the said and his Heirs, be within any Reservation heretofore made and marked for Us, Our Heirs and Successors by Our Surveyor General of Woods, or his lawful Deputy; in which Case, this Our Grant for such Part of the Land hereby given and granted to the said and his Heirs for ever as aforesaid, and which shall upon a survey thereof, being made, be found within any such Reservation, shall be null and void, any thing herein contained, to the contrary notwithstanding."

SEVENTH. That the Two Sevenths reserved for the Crown's future Disposition, and the Support of a Protestant Clergy, be not severed Tracts each of One Seventh Part of the Township, but such Lots or Farms therein, as in the Surveyor General's Return of the Survey of the Township, shall be described as set apart for these Purposes, between the other Farms of which the said Township shall consist, to the Intent that the Lands so to be reserved, may be nearly of the like Value with an equal Quantity of the other Parts to be granted out as aforementioned.

EIGHTH. That the respective Patentees are to take the Estates granted to them severally free of Quit Rent and of any other Expenses, than such Fees as are or may be allowed to be demanded and received by the different Officers concerned in passing the Patent and recording the same, to be stated in a Table authorized and established by the Government and publickly fixed up in the several Offices of the Clerk of the Council, of the Surveyor General, and of the Secretary of the Province.

NINTH. That every Patent be entered upon Record within Six Months from the Date thereof, in the Secretary's or Register's Offices, and a Docket thereof in the Auditor's Office.

TENTH. Whenever it shall be thought advisable to grant any given Quantity to one Person of One Thousand Acres or under, and the same cannot be found by Reason of the said Reservations and prior Grants within the Township in the Petition expressed, the same, or what shall be requisite to make up to such Person the Quantity advised, shall be located to him, in some other Township upon a new Petition for that Purpose to be preferred.

And of the said several Regulations, all Persons concerned are to take Notice, and govern themselves accordingly.

GIVEN under my Hand and Seal in the City of Quebec, the Seventh Day of February, in the Thirty-second Year of His Majesty's Reign, and in the Year of Our Lord One thousand Seven hundred and Ninety-two.

JOHN GRAVES SIMCOE.

By His Excellency's Command,
Thos. Talbot, Acting Secretary.

APPENDIX X.

First Counties in Upper Canada.

PROCLAMATION

(16 July, 1792.)

J. GRAVES SIMCOE.

GEORGE the THIRD, by the grace of God, of Great Britain, France, and Ireland, King, Defender of the Faith, and so forth, &c. To all our loving subjects, whom these presents may concern:

(Preamble re the division of the Province into Counties omitted).

That the first of the said counties be hereafter called by the name of the county of Glengary; which county is to be bounded on the east by the lines that divide Upper from Lower Canada, on the south by the river St. Lawrence, and westerly by the easternmost boundary of the late township of Cornwall, running north twenty-four degrees west until it intersects the Ottawa or Grand river, thence descending the said river until it meets the divisional lines aforesaid. The said county is to comprehend all the islands in the said river St. Lawrence nearest to the said county, and in the whole or greater part fronting the same.

That the second of the said counties be hereafter called by the name of the county of Stormont; which county is to be bounded on the east by the westernmost line of the county of Glengary, on the south by the river St. Lawrence, to the westernmost boundary of the late township of Osnaburg, and on the west by the easternmost boundary line of the late township of Williamsburgh, running north twenty-four degrees west until it intersects the Ottawa or Grand river, then descending the said river until it meets the northwesternmost boundary of the county of Glengary. The said county of Stormont is to comprehend all the islands in the said river St. Lawrence nearest to the said county, in the whole or greater part fronting the same.

That the third of the said counties be hereafter called by the name of the county of Dundas; which county is to be bounded on the east by the westernmost boundary line of the county of Stormont, on the south by the river St. Lawrence, and on the west by the easternmost boundary line of the late township of Edwardsburg, running north twenty-four degrees west until it intersects the Ottawa or Grand river, thence descending the said river until it meets the northwesternmost boundary of the county of Stormont. The said county of Dundas is to comprehend all the islands in the said river St. Lawrence nearest to the said county, in the whole or greater part fronting the same.

That the fourth of the said counties be hereafter called by the name of the county of Grenvill; which county is to be bounded on the east by the westernmost line of the county of Dundas, on the south by the river St. Lawrence, and on the west by the easternmost boundary line of the late township of Elizabethtown, running north twenty-four degrees west until it intersects the Ottawa or Grand river, thence descending the said river until it meets the northwesternmost boundary of the county of Dundas. The said county of Grenvill is to comprehend all the islands in the river St. Lawrence nearest to the said county, in the whole or greater part fronting the same.

That the fifth of the said counties be hereafter called by the name of the county of Leeds; which county is to be bounded on the east by the westernmost line of the county of Grenvill, on the south by the river St. Lawrence, and on the west by the easternmost boundary line of the late township of Pittsburgh, running north until it intersects the Ottawa or Grand river, thence descending the said river until it meets the northwesternmost boundary of the county of Grenvill. The said county of Leeds is to comprehend all the islands in the said river St. Lawrence nearest the said county, in the whole or greater part fronting the same.

That the sixth of the said counties be hereafter called by the name of the county of Frontenac; which county is to be bounded on the east by the westernmost line of the county of Leeds, on the south by lake Ontario, on the west by the easternmost boundary line of the late township of Ernestown, running north twenty-four degrees west until it intersects the Ottawa or Grand river, thence descending the said river until it meets the northwesternmost boundary of the county of Leeds.

That the seventh of the said counties be hereafter called by the name of the county of Ontario; which county is to consist of the following islands: An island at present known by the name isle Tonti, to be called Amherst island; an island known by the name of isle au Foret, to be called Gage Island; an island known by the name of Grand island, to be called Wolfe island; an island known by the name of isle Cauchois, to be called Howe island, and to comprehend all the island between the mouth of the Gananoque to the easternmost extremity of the late township of Marysburgh, called point Pleasant.

That the eighth of the said counties be hereafter called by the name of the county of Addington; which county is to be bounded on the east by the westernmost line of the county of Frontenac, on the south by lake Ontario, to the westernmost boundary of the late township of Ernestown, and on the west by the easternmost boundary line of the township of Fredericksburgh, running north thirty-one degrees west until it meets the Ottawa or Grand river, thence descending the said river until it meets the northwesternmost boundary of the county of Frontenac; comprehending within the said county all the islands nearest to it, in the whole or greater part fronting the same.

That the ninth of the said counties be hereafter called by the name of the county of Lenox; which county is to be bounded on the east by the westernmost line of the county of Addington, on the west and south by the bay of Quinte, to the easternmost boundary of the Mohawk village, thence by a line along the westernmost boundary of the late township of Richmond, running north sixteen degrees to the depth of twelve miles, thence running north seventy-four degrees east until it meets the northwesternmost boundary of the county of Addington; and comprehending all the islands in the bays and nearest to the shores thereof.

That the tenth of the said counties be hereafter called by the name of the county of Prince Edward; which county is to be bounded on the south by lake Ontario, on the west by the carrying-place on the isthmus of the Presque isle d'Quinte, on the north by the bay of Quinte, and on the east, from point Pleasant to point Traverse, by its several shores and bays, including the late township of Ameliasburg, Sophiasburg, and Marysburg. The said county of Prince Edward is to comprehend all the islands in the said lake Ontario and bay of Quinte nearest to the said county, in the whole or greater part fronting the same.

That the eleventh of the said counties be hereafter called by the name of the county of Hastings; which county is to be bounded on the east by the westernmost line of the county of Lenox, on the south by the bay of Quinte, until it meets a boundary on the easternmost line of the river Trent, thence along the said river until it intersects the rear of the ninth concession, thence by a line running north sixteen degrees west until it intersects the Ottawa or Grand river, thence descending the said river until it meets the northwesternmost boundary of the county of Addington; and the said county of Hastings, to comprehend all the islands in the said bay of Quinte and river Trent nearest to the said county, in the whole or greater part fronting the same.

That the twelfth of the said counties be hereafter called by the name of the county of Northumberland; which county is to be bounded on the east by the westernmost line of the county of Hastings and the carrying-place of the Presque isle d'Quinte, on the south by lake Ontario until it meets the westernmost point of the Little bay, thence by a line running north sixteen degrees west until it meets the southern boundary of a tract of land belonging to the Mississague Indians, thence along the said tract parallel to lake Ontario until it meets the northwesternmost boundary of the county of Hastings. The said county of Northumberland is to comprehend all the islands in the said lake Ontario and bay of Quinte nearest to the said county, in the whole or greater part fronting the same.

That the thirteenth of the said counties be hereafter called by the name of the county of Durham; which county is to be bounded on the east by the westernmost line of the county of Northumberland, on the south by lake Ontario until it meets the westernmost point of Long Beach, thence by a line running north sixteen degrees west until it intersects the southern boundary of a tract of land belonging to the Mississague Indians, thence along the said tract parallel to lake Ontario until it meets the northwesternmost boundary of the county of Northumberland.

That the fourteenth of the said counties be hereafter called by the name of the county of York; which county is to consist of two ridings, the east and west riding; the east riding is to be bounded on the east by the westernmost line of the county of Durham, on the south by lake Ontario until it meets the easternmost boundary of a tract of land belonging to the Mississague Indians, on the west by the easternmost boundary line of said tract, running north sixteen degrees west the distance of twenty-eight miles, north seventy-four degrees east fourteen miles, thence south sixteen degrees east sixteen miles, to the southern boundary of the lands belonging to the said Indians, thence along the said tract parallel to lake Ontario until it meets the northwesternmost boundary of the county of Durham. That the west riding of the said county be hereafter called by the name of the west riding of the county of York; which riding is to be bounded on the east by the westernmost line of a tract of land belonging to the Mississague Indians, running north forty-five degrees west to the river La Tranche, to be called the Thames, on the south by lake Geneva, to be called Burlington bay, and a carrying-place leading through the Mohawk village to where it intersects the river La Tranche or Thames, thence up the said river to the northwesternmost boundary of a tract of land belonging to the Mississague Indians.

That the fifteenth of the said counties be hereafter called by the name of the county of Lincoln; which county is to be divided into four ridings. The first riding is to be bounded on the west by the easternmost line of the county of York, on the south by the Grand river, to be called the Ouse, thence descending the said river until it meets an Indian road leading to the forks of the Chippawa creek, which creek is to be called the Welland, thence descending the said creek until it meets the continuation of the easternmost boundary of the late township No. 5, thence north along the said boundary until it intersects lake Ontario, thence along the south shore of lake Ontario until it meets the southeast boundary of the county of York. The second riding is to be bounded on the west by the easternmost line of the first riding, on the north by lake Ontario, on the east by the river Niagara, and on the south by the northern boundary of the late townships No. 2, No. 9, and No. 10. The third riding is to be bounded on the east by the river Niagara, on the south by the Chippawa or Welland, on the west by the easternmost boundary of the first riding, and on the north by the southern boundary of the second riding. The fourth riding is to be bounded on the east by the river Niagara, on the south by lake Erie, to the north of the Grand river or Ouse, thence up the said river to the road leading from the said Grand river or Ouse, to the forks of the Chippawa or Welland, and on the north by the said road until it strikes the forks of the Welland, thence down the said Welland to the river Niagara; the said fourth riding to include the islands comprised within the easternmost boundaries of the river Niagara.

That the sixteenth of the said counties be hereafter called by the name of the county of Norfolk; which county is to be bounded on the north and east by the county of Lincoln and the river La Tranche, now called the Thames, on the south side by the lake Erie until it meets the Barlue, to be called the Orwell river, thence by a line running north sixteen degrees west until it intersects the river La Tranche or Thames, thence up the said river until it meets the northwest boundary of the county of York.

That the seventeenth of the said counties be hereafter called by the name of the county of Suffolk; which county is to be bounded on the east by the county of Norfolk, on the south by lake Erie, until it meets the carrying-place from point au Pins, unto the Thames, on the west by the said carrying-place, thence up the said river Thames until it meets the northwesternmost boundary of the county of Norfolk.

That the eighteenth of the said counties be hereafter called by the name of the county of Essex; which county is to be bounded on the east by the county of Suffolk, on the south by lake Erie, on the west by the river Detroit to Maisonville's mill, from thence by a line running parallel to the river Detroit and lake St. Clair, at the distance of four miles, until it meets the river La Tranche or Thames, thence up the said river to the northwest boundary of the county of Suffolk.

That the nineteenth of the said counties be hereafter called by the name of the county of Kent; which county is to comprehend all the country not being territories of the Indians, not already included in the several counties hereinbefore described, extending northward to the boundary line of Hudson's bay, including all the territory to the westward and southward of the said line, to the utmost extent of the country commonly called or known by the name of Canada.

And know ye, also, that our said Lieutenant-governor hath also declared and appointed, and doth hereby declare and appoint, that for the purposes of representation, the said county of Glengary, bounded as aforesaid, shall be divided into two ridings, the first riding to include the late township of Charlottenburgh, and the second riding to comprehend such part of the said county of Glengary as is not contained in the first riding, and that each of the said ridings shall send one representative; that is, the first riding shall and may be represented in the said house of assembly by one member, and the said second riding shall and may be represented in the said house of assembly by one member; and that the said county of Stormont, bounded as hereinbefore is described, shall and may be represented in the said house of assembly by one member; and that the said county of Dundas, bounded as hereinbefore is described, shall and may be represented in the said house of assembly by one member; and that the said county of Grenvill, bounded as hereinbefore is described, shall and may be represented in the said house of assembly by one member; and that the said county of Leeds and county of Frontenac, severally bounded as hereinbefore is described, shall together send one representative, that is, the said counties of Leeds and Frontenac shall and may be represented together in the said house of assembly by one member; and that the county of Ontario and the county of Addington, severally bounded as hereinbefore is described, shall together send one representative, that is, the said counties of Ontario and Addington shall and may be represented together in the said house of assembly by one member; and that the county of Prince Edward, bounded as hereinbefore is described, together with the district of the late township of Adolphus, in the county of Lenox, shall together send one representative, that is, the said county of Prince Edward, together with the said district, late the township of Adolphus, shall and may be represented together in the said house of assembly by one member; and that the county of Lenox (the said district, late the township of Adolphus, excepted), with the counties of Hastings and Northumberland, severally bounded as hereinbefore is described, shall together send one representative, that is, the said county of Lenox, except as before excepted, and the said counties of Hastings and Northumberland shall and may be represented together in the said house of assembly by one member; and that the counties of Durham and York, and the said first riding of the county of Lincoln, severally bounded as hereinbefore is described, shall together send one representative, that is, the said counties of Durham and York, and the first riding of the county of Lincoln, shall and may be represented together in the said house of assembly by one member; and that the said second riding of the said county of Lincoln, bounded as hereinbefore described, shall and may be represented in the said house of assembly by one member; and that the said third riding of the said county of Lincoln, bounded as hereinbefore is described, shall and may be represented in the said house of assembly by one member; and that the said fourth riding of the said county of Lincoln, and the county of Norfolk, severally bounded as hereinbefore is described, shall together send one representative, that is, the said fourth riding of the said county of Lincoln and the county of Norfolk, shall and may be represented together in the said house of assembly by one member; and that the county of Suffolk and the county of Essex, severally bounded as hereinbefore is described, shall together send one representative, that is, the said counties of Suffolk and Essex, shall and may be represented together in the said house of assembly by one member; and that the said county of Kent, as hereinbefore is described, shall and may be represented in the said house of assembly by two members; of which our loving subjects and all others concerned are to take notice, and govern themselves accordingly.

In the testimony whereof, We have caused these our letters to be made patent, and the great seal of our said province of Upper Canada to be hereunto affixed. Witness our trusty and well beloved John Graves Simcoe, esquire, our lieutenant-governor of our said province of Upper Canada, and colonel commanding our forces in Upper Canada, &c., &c., at our government house in the town of Kingston, this sixteenth day of July, in the year of our Lord one thousand seven hundred and ninety-two, and in the thirty-second year of our reign.

J. G. S.

WM. JARVIS, Secretary.

APPENDIX XI

COPY OF OLD INSTRUCTIONS TO DEPUTY LAND SURVEYORS

Surveyor General's Office

Quebec, 22d February, 1791.

You are hereby directed to engage Ten chain bearers and ax men on the most reasonable terms they can be had, not exceeding one shilling and sixpence currency per day each man, with an allowance of one shilling and threepence per day to yourself and party for provisions or a ration of provisions from the King's Stores in lieu therof, at your and their option.

And immediately proceed with all diligence to survey and mark a town plot, for a county town of the district to be called Lenox, on the west side of Niagara River, at such place and according to such plan and dimensions as the Land Board of the said district may direct; in conformity to the general rules and regulations.

And likewise to survey and mark the front lines of a row of townships, from the Eastern boundary of the District to Toronto, and to carry the side lines of each township back one mile well marked, which townships are to be designated on the Chart; the first adjoining the said Eastern boundary by the name of Murray, and the rest as they follow in proceeding westerly in the order here mentioned Viz. Cramahe, Haldimand, Hamilton, Hope, Clark, Bristol, Norwich, Edinburgh, Glasgow and Dublin.

You are to commence and proceed in the execution of this work with all diligence, accuracy and fidelity in conforming to the General Rules and Regulations in all instances not otherwise specially directed.

You are to keep journals and field books inserting therein whatever is observable for its singularity and value towards the publick utility, as water falls, minerals, quarries, the quality of the lands, timber, &c., and likewise accounting for the time spent upon each service with such minuteness and certainty as will shew the work of each day, and enable you to answer questions upon oath in respect thereto if the same shall be required, reporting all such journals and field books under your signature, to this Office after the completion of the work, together with protraction thereof both to me and the Land Board of the District in which you have been employed.

You are to pay a very strict attention to economy in the whole Service and dismiss the hands as soon as they can be spared; and as the accounts will all be subject to audit, you'll take care to finish the necessary documents and justification of every article of charge: observing nevertheless that it is not intended by any small savings to disappoint the useful ends, for which these surveys are ordered; but that a responsible discretion must be exercised in the expenditure both of the time and the means.

You are to communicate these instructions to the Land Board of Nassau, and a copy therof is to accompany the accounts hereafter, to be rendered to obtain payment, for the services you shall have performed. Wishing you health,

I am with regard, Sir,

Your most obedt. Servant,

SAMUEL HOLLAND, S. Gen.
John Collins, D.S.G.

To Mr. Augustus Jones, D.P.S.

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Powell, William Dummer, 19.
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Sherwood, Justus, 18.
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Stuart, Rev. John, 19.
Tenbrook, Peter, 19.
Van Alstine, Peter, 19.
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PROVINCE OF ONTARIO

Department of

Northern Development

Report of Operations under The Northern Development
Act, R.S.O. 1927, and The Colonization Roads
Act, R.S.O. 1927,

AND AMENDMENTS

For the Year Ending 31st October

1929

PRINTED BY ORDER OF
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SESSIONAL PAPER No. 27, 1930

ONTARIO

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1930

PRODUCED BY
The
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TORONTO
CANADA

To His Honour William D. Ross, Esq.,
Lieutenant-Governor of the Province of Ontario.

May It Please Your Honour:

The undersigned has the honour to present Report on Operations under The Northern Development Act, R.S.O. 1927 and amendments, for the fiscal year ending 31st October, 1929.

Wm. Finlayson,
Minister.

Toronto, Ont., February 5th, 1930.

HONOURABLE WM. FINLAYSON,
Minister of Lands and Forests.

I have the honour to present herewith Report on the Operations of the Department of Northern Development for the fiscal year ending 31st of October, 1929.

C. H. FULLERTON,
Deputy Minister.

Toronto, February 5th, 1930.

SECTION 11 (B), ROADS AND BRIDGES

Chief Engineer's Report

On the Construction and Maintenance of Roads and Bridges carried on under the provisions of The Northern Development Act, R.S.O. 1927 and amendments, during the year ending 31st of October, 1929.

All road and bridge work is carried out under The Northern Development Act in the electoral districts of Sturgeon Falls, Sudbury, Manitoulin, Algoma, Sault Ste. Marie, Temiskaming, South Cochrane, North Cochrane, Fort William, Port Arthur, Rainy River and Kenora, in the portion of the electoral district of Nipissing lying north of the C.P.R. and on certain main roads in the electoral districts of Muskoka, Parry Sound, North Renfrew and that part of Nipissing lying south of the C.P.R.

The total expenditure in this section was $4,954,229.70.

Organization

For administration purposes, Northern Ontario is divided into ten districts, with an engineer in charge of each as follows:—

I.	Muskoka and Parry Sound with headquarters at	Huntsville
II.	Nipissing, Sturgeon Falls and North Renfrew at	North Bay
III.	Sudbury and Manitoulin at	Sudbury
IV.	Algoma and Sault Ste. Marie at	Sault Ste. Marie
V.	Temiskaming at	New Liskeard
VI.	North Cochrane at	Cochrane
VII.	South Cochrane at	Matheson
VIII.	Fort William and Port Arthur at	Fort William
IX.	Rainy River at	Fort Frances
X.	Kenora at	Kenora

Construction

Construction is largely carried on through the Departmental Engineers by day labor but in instances where it is deemed more expedient contracts are let for specific works.

The work consists of opening up new roads leading to settlers in territory which up to the time of construction was isolated,—reconstruction, with any necessary relocation of roads, trails, bridges, etc., to a standard suitable for present day traffic,—construction of new routes demanded by traffic.

Maintenance

All main roads are intensively maintained by the Department through continual employment of local patrol men and patrol gangs and by periodic patrol with heavy power machinery.

Main Trunk Roads

Total costs of construction and maintenance on other than urban portions of main trunk roads are borne by the Department and where roads pass through small towns and villages, periodic assistance in the nature of gravelling and maintaining has been given to the municipality.

Where main routes pass through city and larger town municipalities which are doing permanent construction, the policy of the Department has been to bear a portion of the cost of the through road. Instances of municipalities which have been assisted in this manner on their through streets are:—Gravenhurst, Bracebridge, Parry Sound, Huntsville, North Bay, Sudbury, Sault Ste. Marie, Cobalt, Haileybury, Timmins, Port Arthur, Fort William, Fort Frances, etc.

During the past year and preceding years intensive work has been done on the Ferguson Highway and the net-work of roads leading to it, so that to-day all of northeastern Ontario has access to this main artery connecting with the older settlement in the south.

The trunk road from Pembroke passing through Mattawa, North Bay, Sturgeon Falls, Sudbury and Blind River to Sault Ste. Marie is maintained and is being improved by the Department to accommodate local and cross province traffic.

In the Thunder Bay district the cities of Port Arthur and Fort William, have access to Duluth via the International highway upon which extensive improvements were made during the past season. The Nipigon highway leading to the east, a distance of 77 miles, gives access to Lake Nipigon.

From Kenora, in the extreme west, a main road is under construction to Fort Frances which will give the town of Kenora its first outlet by road.

Municipal Agreements and Statute Labour Grants

In organized township municipalities the Department encourages, and assists in, the improvement of all roads, entering into an "Agreement" with the municipal council to reimburse them to the extent of 50 per cent. of the cost of the work done by the municipality if the same is approved of and meets the stanards set by the Department through its Engineers and Inspectors.

Statute labor boards are treated in a similar manner so that in practically all cases when statute labor has been properly performed the Department makes a direct grant for further road work. This direct grant is at least equal to the value of the statute labor performed.

Settlers Roads

Settlers in unorganized territory and in many of the poorer organized townships receive in addition to the agreement or statute labor grant further direct 100 per cent. assistance on their roads, thus being relieved of much of the hardship connected with pioneering.

Railway Crossings

Investigations have been made throughout the Northern Development area with a view to reducing the railway crossing menace and as a result many level crossings have been eliminated by grade separation or road relocation and others greatly bettered by improving dangerous approaches.

Development of Mining Areas

To give access to several mining areas roads have been opened up and water transportation routes established and improved. The cost of this work was shared between the Department and the Mining Operators.

Retread Surface—Ferguson Highway, Severn to Gravenhurst.

District No. 1—Muskoka and Parry Sound

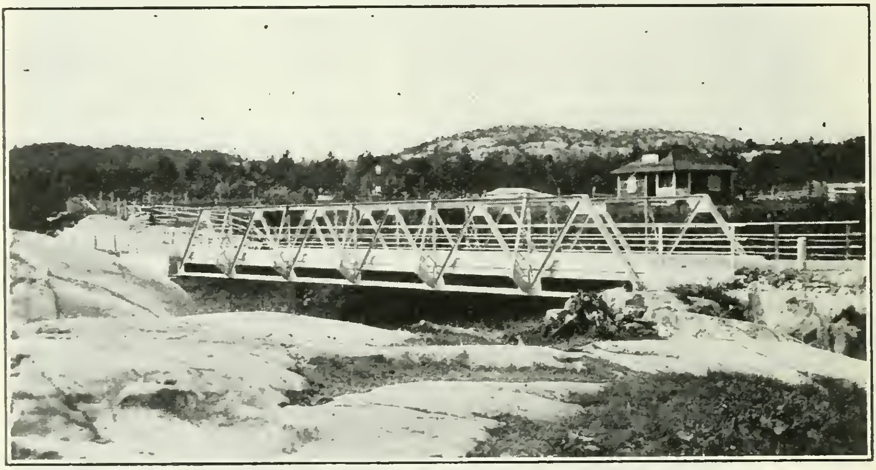
In this district only certain trunk roads come under the jurisdiction of the District Engineer and as the work was of large proportions more of it was done by contract than in other districts.

In all a total of 16 contracts were operated on, ten of them being for construction on the Ferguson Highway and the work done consisted of laying 15.8 miles retread penetration surface, erection of eleven concrete bridges up to 40-foot span and the construction of 18.7 miles of 30 foot roadway. The retread surface north from Severn Bridge supplies a long felt need and has proved to be a very popular improvement.

Maintenance included the continual patrol of 499 miles of trunk road from the early spring to the late fall freeze up.

District No. 2—Nipissing, Sturgeon Falls and North Renfrew

Among the major works of the fiscal year were the widening of eight miles of road between Pembroke and Petawawa, the bettering of two miles of road between North Bay and Sturgeon Falls and the blasting of rock on the Warren-Rutter road.



Whitefish Falls Bridge—Espanola Little Current Road.

Bridges constructed included a 249-foot steel and concrete structure over Bissett's Creek which eliminated a very dangerous railway crossing on the North Bay-Pembroke trunk road; construction of a 250-foot pile trestle at a bad sink hole on the Ferguson Highway and the erection of a timber bridge over the Veuve River to provide an outlet for the settlers in the vicinity of Kirk Station.

Of the 1,298 miles of roads in the district, 307 were under constant patrol maintenance, the work included dragging, ditching, sidebrushing, gravelling, etc.

A considerable amount was expended on a dollar for dollar basis with the municipalities and statute labour boards and many settlers received direct assistance from the Department to improve their outlets.

District No. 3—Sudbury and Manitoulin

Eight miles were graded in the Espanola-Little Current road completing the link to the ferry between the main land and Little Current on Manitoulin Island.

Major improvements were made on the North Bay-Sudbury and Sault-Sudbury, the Chelmsford-Blezard Valley, the Sudbury-Capreol and the Chapleau-Devon roads.

Bridge construction included a 95-foot steel and concrete structure at Whitefish Falls and the erection of a 45-foot timber structure at McGregor Bay.

Of 1,558 miles of road in the district, 493 miles were maintained and kept in the best possible condition at all times.

Under agreements with municipal councils, co-operation with statute labour boards and by direct assistance in many cases a great deal was accomplished towards improving and extending the side roads.

District No. 4—Algoma and Sault Ste. Marie

On the Sault-Sudbury Trunk Road major improvements were made for a total distance of 37 miles, part of the works lying in the vicinity of Echo Bay, of Bruce Mines, of Thessalon, of Blind River and of Webbwood. The work included widening with leaning-wheel grader, rock cutting, erection of guard rail, gravel and clay surfacing, etc.

At Michipicoten on the road from Wa Wa to the Minto mine, one mile of new road was constructed using crushed rock surfacing, and two miles reconstructed with gravel surface.

Four miles were surfaced with clay and gravel on the Haviland Bay road and seventeen miles on the Sault-Searchmont Road.

Three hundred and forty-eight and one-half miles of road were constantly maintained out of a total mileage of roads in the district of 1,540.

Twenty-six thousand feet of standard guard cable were erected.

Poplar and willow cuttings and pine and cedar seedling were planted at points throughout the district to protect banks and slopes from erosion.

District No. 5—Temiskaming

Winter gravelling of unusual extent was an outstanding feature of the season's work. The previous fall had been very wet and the harvest almost totally ruined, consequently the Department proceeded with all the work possible in order to give assistance to needy settlers.

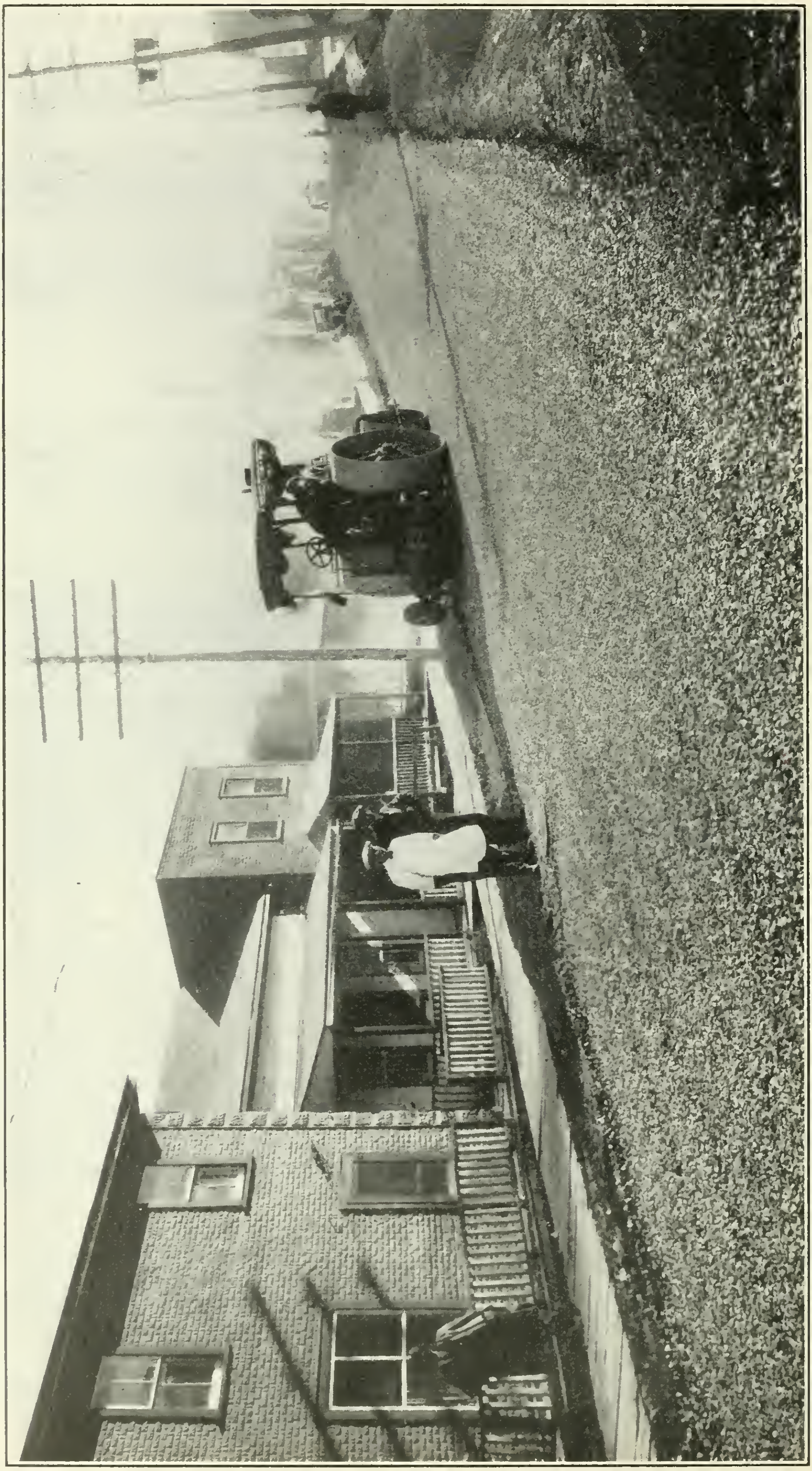
The major construction of the year was between Latchford and Cobalt on the Ferguson Highway. This stretch while open to travel for some years was not suitable for the present traffic. It was straightened, widened and improved generally, being brought to a standard comparable with recent construction on other parts of the road.

Three hundred and two miles of road were under maintenance patrol out of a total road mileage of 1,024.

District No. 6—North Cochrane

In this district work was concentrated on "connecting" roads and roads to provide outlets for bonafide settlers.

The work involved the drainage of muskegs traversed by the roads and this was accomplished by letting 29 ditching contracts averaging about 6,000 cubic yards each.



Penetration Surface—Ferguson Highway, Through Cobalt, Ont.

The gap on the Cochrane-Hearst road between Smooth Rock and Cochrane was completed making travel possible from Cochrane west to Opasatika a distance of 92 miles.

The road on the boundary line between Clute and Glackmeyer, Blount and Leitch and between Con. X and XI across to the railroad track was graded thus giving settlers of ten years standing their first outlet.

Of 665 miles of road in the district, 226 were under maintenance patrol.

District No. 7—South Cochrane

A 13-mile diversion was constructed by day labour on the Ferguson Highway between Ramore and Matheson. This diversion eliminates sharp curves and steep grades and is complete except for gravelling and the construction of the bridge and approaches at the Wild Goose River.

Widening and Improving International Highway from Fort William to Boundary of Minnesota.

Settlers, statute labour commissions and organized municipalities were given all the assistance possible on side roads.

Of 559 miles of road in the district, 141 miles were under a maintenance patrol system which gave good results.

District No. 8—Fort William and Port Arthur

The outstanding features of the work in Thunder Bay district were the extensive improvement of the Nipigon Highway, the continuation of the Schreiber Rossport Road and the completion of the contract on the International Highway all sections of the same being gravelled by the Department after the contract was completed.

Southward from the boundary of Fort William the International Highway was widened for a distance of about five miles.

The Dawson Road was extended to Shebandowan Lake, a distance of four miles.

Patrol maintenance of 304 miles out of a total road mileage of 940, consisted of dragging, patching, cleaning ditches, cutting brush, which kept the road surface continually in good shape.

District No. 9—Rainy River

Thirteen miles of grading on the Kenora Highway extended the same to within four miles of Nester's Falls.

The Emo-Off Lake Road was extended to Clear Water Lake, a distance of four miles.

The widening of the trunk road between Fort Frances and Emo was completed and in addition several miles of trunk road in the west end of the district were widened.

Farming in Rainy River District.

An important feature of the season's work was the number of bridges constructed and maintained. In all, 32 new structures were erected and 14 were repaired.

Of 712 miles of road in the district the Department by maintenance patrol cared for 238 miles.

District No. 10—Kenora

Ten miles of the Kenora-Fort Frances Highway was brought up to a standard 24-foot roadway and the road was extended by twenty-two miles of new construction to the southern end of Dog Tooth Lake.

The Sioux-Lookout to Dinorwic Trunk Road was extended south of Frog Rapids bridge, a distance of 5½ miles.

Bridge work included the Darlington Bay bridge where the work consisted of dismantling a dilapidated 300-foot log structure, replacing the same by a rock fill of 10,134 cubic yards and the erection of a 45-foot timber truss.

Out of a total ot 519 miles of road, 181 miles were under maintenance patrol and were at all times kept in the best possible condition.

Municipal Agreements—Summary

A summary of the work accomplished by eighty-five municipalities operating under agreements with the Department indicates the following work performed:—

Cutting and burning new road 8.4 miles; side brushing existing road 215.0 miles; stumping and grubbing 26.9 miles; grading 22.1 miles; regrading 626.8 miles; ditching 97.1 miles; surfacing with gravel, new road 71.1 miles, old road 471.6 miles, with clay 4.8 miles, with crushed stone 6.2 miles, with bituminous seal coat 8.3 miles; dragging 9,052 miles; guard rail erected 1,013 lineal feet; culverts installed—wood 379, stone and concrete 72, metal 79; culverts repaired—wood 160, stone and concrete 3; bridges—erected 17, repaired 25; excavation—rock 330 cubic yards, other material 27,165 cubic yards.

Assistance on Pavements

Arrangements were made whereby the Department was to assist Huntsville, Kapuskasing, Kirkland Lake, Fort William, Cobalt and Port Arthur in defraying expenditures incurred through laying pavements on roads which are units of the Trunk Road System. Generally the amount contributed by the Department was equal to 50 per cent. of the cost of a 20-foot pavement over the distance improved.

JAS. SINTON,
Chief Engineer, Department of Northern Development, Ontario.

Toronto, February, 1930.

SUMMARY OF EXPENDITURE FOR THE EIGHTEEN YEARS ENDED 31st OCTOBER, 1929

NORTHERN ONTARIO DEVELOPMENT FUND

	Summary of Expenditure, May 23, 1912 to Oct. 31, 1928	Expenditure for Year ended October 31, 1929	Total Expenditure to October 31, 1929
Section 11 (a), Works and Improvements	$2,100 00	....	$2,100 00
Section 11 (b), Roads and Bridges	30,620,491 24	$4,954,229 70	35,574,720 94
Section 11 (d) Farms	206,110 04	....	206,110 04
Section 11 (d) Assistance of Settlers; Fire Relief	329,099 50	....	329,099 50
Section 11 (d) Assistance of Settlers; Saw Mills	14,945 90	....	14,945 90
Section 11 (d) Assistance of Settlers; Feed Shortage	124,268 82	....	124,268 82
Section 11 (d) Creameries and Grain Elevators	70,400 16	5,297 18	75,697 34
Section 11 (f) Seed Grain	325,114 60	35,534 42	360,649 02
Section 11 (f) Agricultural Implements	46,826 22	....	46,826 22
Section 11 (h) Purchase of Cattle	73,250 66	10,385 49	83,636 15
Section 11 (j) Schools and Other Public Bldgs	52,999 29	....	52,999 29
Section 11 (k) Work not otherwise provided for	4,519 27	....	4,519 27
Returned Soldiers' and Sailors' Settlement Act, 1917	1,185,568 02	....	1,185,568 02
	$33,055,693 72	$5,005,446 79	$38,061,140 51
Settlers' Loan Account	1,509,351 71	81,200 60	1,590,552 31
	$34,565,045 43	$5,086,647 39	$39,651,692 82

NORTHERN ONTARIO DEVELOPMENT FUND

R.S.O. 1927, Chap. 36, Sec. 8

Short Statement

April 16th, 1912—To amount voted for Expenditure in N. & N.W. Ontario	$5,000,000 00
March 26th, 1918 " " " " "	5,000,000 00
May 31st, 1921 " " " " "	5,000,000 00
May 8th, 1923 " " " " "	5,000,000 00
April 14th, 1925 " " " " "	5,000,000 00
April 8th, 1926 " " " " "	5,000,000 00
April 5th, 1927 " " " " "	5,000,000 00
March 28th, 1929 " " " " "	5,000,000 00
	$40,000,000 00
April 16th, 1912 to October 31st, 1929; By Expenditure for 18 years as per detailed statement	39,651,692 82
Balance available, 1st November, 1929	$348,307 18

DEPARTMENT OF NORTHERN DEVELOPMENT

Statement of Expenditure, Year Ended 31st October, 1929

Administration, Section 9		
Salaries of Permanent Staff	$92,691 34	
Salaries of Temporary Staff	10,284 04	
	$102,975 38	
Travelling Expenses, Supplies and Contingencies	21,920 84	
		$124,896 22
Roads and Bridges, Section 11 (b)		
Wages	$2,703,569 72	
Contracts	728,564 61	
Equipment, Supplies, Rentals, Services, Disbursements	1,397,199 15	
		4,829,333 48

Creameries, Section 11 (d), Cochrane, Larocque, Matheson, Moonbeam, Hearst and Lee Valley			$5,297 18
Seed Grain, Section 11 (f)			
Seed, Freight, Services and Disbursements			35,534 42
Purchase of Cattle, Section 11 (h)			
Cost of Cattle, Freight, Feed, Services and Disbursements			10.385 49
Settlers' Loan Account			
F. Dane, Commissioner, Salary		$5,000 00	
Salaries of Permanent Staff		4,441 59	
		$9,441 59	
Net amount of loans issued	$70,430 00		
Disbursements	1,329 01		
		71,759 01	
			81,200 60
Total			$5,086,647 39

DEPARTMENT OF NORTHERN DEVELOPMENT

STATEMENT OF REVENUE FOR THE YEAR ENDED 31ST OCTOBER, 1929

	Capital	Ordinary	Totals
Section 11 (b) Roads			
Sale of Equipment, Land, Supplies, Rentals, Refunds of Road costs, etc	$6,534 05	$889 47	$7,423 52
Section 11 (d) Assistance of Settlers: Feed Shortage			
Payment of Principal on Notes	505 31	....	
Interest	....	182 98	688 29
Section 11 (f) Seed Grain			
Payment of Principal on Notes	15,750 50	....	
Interest	....	1,925 95	17,676 45
Section 11 (f) Agricultural Implements			
Payment of Principal on Notes	443 29	....	
Interest	....	129 84	573 13
Section 11 (h) Purchase of Cattle			
Payment of Principal on Notes	6,522 14	....	
Interest	....	520 19	7,024 33
General Account			
Bank Interest	....	1,193 69	1,193 69
Settlers' Loan Account			
Payment on Principal	67,566 18	....	
Interest, Exchange, etc	....	26,788 23	94,354 41
Branch—Colonization Roads			
Casual Refunds	666 70	311 14	977 84
Totals	$97,988 17	$31,923 49	$129,911 66

DEPARTMENT OF NORTHERN DEVELOPMENT

Assets, October 31st, 1929

	Principal	Accrued Interest	
Cash Balances Unexpended			
Administration, Section 9			$3,659 22
Notes Outstanding			
Section 11 (d) Feed Shortage	$51,270 36	$17,313 41	$68,583 77
Section 11 (f) Seed Grain	97,677 88	31,648 77	129,326 65
Section 11 (f) Agricultural Implements	18,636 72	4,742 89	23,379 61
Section 11 (h) Cattle Purchase	14,118 95	447 76	14,566 71
	$181,703 91	$54,152 83	$239,515 96
Settlers' Loan Account			
Loans outstanding	$574,589 78	$41,182 56	$615,772 34
Total			$855,288 30

Contingent Assets

Roads: Land, Buildings, Plant, Equipment, Motors, Tractors, etc. $497,152 25

W. Ll. Lawer,
Accountant.

Toronto, November 9th, 1929.

Elect
ALGOM
COCHRA
COCHRA
FORT V
KENOR
MANITO
MUSKO
NIPISSI
PARRY
PORT A
RAINY
RENFRE
SAULT
STURGE
SUDBUR
TEMISK
To

*R

Electoral District	Cutting and Burning New Road Miles	Side Brushing Existing Road Miles	Stumping and Grubbing Miles	Cross Lay Miles	Grading		Ditching Cu. Yds.	Gravelling			Clay Surfacing		Crushed Rock			Dragging Miles	Guard Rail Erected, Lin. Ft.	Culverts			Bridges		Cut and Fill, Cu. Yds.	Rock Excavation, Cu. Yds.	Miscellaneous
					New Miles	Repairs Miles		New		Repairs No. cubic Yds. Gravel Used	Length Miles	No. Cu. Yds. Clay Used	No. Yds. Crushed	No. Yds. Hauled	Length of Road covered Miles			Wood	Stone or Concrete	Metal	No.	Description			
								Length Miles	No. Cu. Yds. Gravel Used																
Algoma	20.07	161.70	46.93	0.07	14.99	1,295.11	17,640	188.65	26,423	74,737	72.07	21,713		3,533	9.33	18,717	12,326	168	42	30	17 19	New Repaired	70,760	7,298	62.43 miles ditch cleaned, 38.91 miles returned, 5,515 cu. yds. stock piled, 15 miles grass and weeds cut, 47.5 miles raked, 25 miles location survey, 12 culverts repaired, 6,476 feet guard rail repaired; 38 stone retaining walls; 1,385 feet guard rail painted, 1,500 sign posts painted and metal signs erected
Cochrane North	19.60	111.70	29.60		27.60	170.60	201,013	24.00	36,835	88,082	93.30	263,661		19		19,578	690	119		299	13 4	New Repaired	55,956		8,212 cu. yds. clay road repairing, 10 culverts repaired, 13,228 yds. stock piled, 300 feet temporary cross lay, 150 feet guard rails placed
Cochrane South	31.68	34.89	21.24		12.06	26.20		106.20		28,869		23,140		4,511		.	1,200	13*		64	3 6	New Repaired	33,341	1,333	6.5 miles road cut to pits; 400 feet snow fences, 52 rods fence erected, 30.61 miles ditches
Fort William	15.90	42.50	22.30	0.80	27.40	39.90	13,039	12.50	33,082	14,162	2.30	3,009	2,118			15,032		241	19	26	13 10	New Repaired	130,270	1,155	Over 800 cedar posts planted for guard rail on contract work, International Highway. Brush alongside road for 4 miles burned, stakes placed at ends of all culverts on trunk roads
Kenora	31.60	138.20	17.40	1.00	51.90	70.50	37,405	58.20	52,488	11,268	15.50	66,811				3,888	3,646	230	20	5	5 17	New Repaired	199,054	46,456	4.1 miles ditch cleaned, 52 piles cut, 131 posts painted, 16 miles raked, 35 miles relocation survey, 1,554 cu. yds. rip-rap, 1 scow built, 30 signs erected, 160 pieces square timber made
Manitoulin	7.8	97.00	7.55	0.05	15.06	80.24	7,140	53.80	23,007	43,654	13.66	9,410				4,151	7,552	66	26	81	5 2	New Repaired	28,358	7,987	2 miles weeds cut, 295 cu. yds. rip-rap; camps and stables erected
Muskoka	4.9	78.52	4.93		7.15	16.50	6,477	23.50	30,542	20,463	0.04	6		40		10,183	22,930	2* 23		95	5 1	New Repaired	159,498	8,763	661 cu. yds. rip-rap, 154 end walls, 3.33 miles creek cleaned, 16 miles treated with calcium chloride, 11.75 miles location survey, 15.8 miles re-tread bituminous surface, 1 mile initial rock for retread, 28 road signs erected, 1 bridge widened, 1 foundation erected for 120 foot steel bridge and steel erected, 9,587 cu. yds. rock and boulder fill.
Nipissing		77.30	4.60	0.16		14.30	4,101	71.50	37,139	8,012	11.30	4,921	45			11,682		1* 58	15	15	2 1	New Repaired	6,057	2,938	53 miles grass and weeds cut, 40 mile posts erected and painted, 38 miles stones raked off road; 5 miles ditch cleaned
Parry Sound	11.30	94.71	11.41		10.87	7.00	3,702	11.60	6,623	51,222	4.06	1,070				20,118	2,925	5* 37		142	12 14	New Repaired	172,886	38,233	36,515 cu. yds. rock and boulder fill, 828 cu. yds. rip-rap, 16 miles location survey, 37 miles trial line, 112 end walls, 1.25 miles ditch cleaned, 1.0 mile creek cleaned, 1 bridge widened, 40 miles brush burned.
Port Arthur	19.40	45.70	44.80		16.90	22.00	44,493	47.10	30,256	19,631	3.20	6,254				11,841	1,135	178	48	9	10 7	New Repaired	69,635	16,125	Ditches on trunk roads cleaned out and stakes placed at ends of all culverts on same. Brush burned on 5 miles
Rainy River	56.9	109.13	34.26	1.35	29.99	44.39	78,820	68.66	62,845	31,665	7.52	11,176		44	0.02	7,890		25* 162	3	27	33 11	New Repaired	18,213	3,314	27.09 miles partially cut and burned, 1.55 miles partially stumped and grubbed
Renfrew North	1.6	64.64	1.70			7.30	5,807	19.50	11,315	2,244	0.37	402				10,114	3,700	2*	18	4	1 2	New Repaired	12,203	9,517	400 guard rail posts painted, 16 road signs erected, 241 concrete tile made, 17 miles relocation survey.
Sault Ste. Marie	3.90	51.15	10.44	0.79	2.49	172.73	21,862	81.10	46,806	27,264	38.98	13,584		1,528	1.43	10,384	28,244	38	16	15	2	Repaired	34,716	319	256 cu. yd. rip-rap, 17,900 feet guard rail repaired, 222 signs erected, 15.5 miles weeds cut, 231 miles raked, 23.94 miles returned, 23 miles location survey, 34,500 trees planted, 14 miles ditches cleaned, 4,861 feet guard rail painted, 2.5 miles scarified, 8.0 miles rolled.
Sturgeon Falls		27.80	1.38			26.07	11,529	66.50	27,789	11,805	3.10	2,214				16,951	471	12* 51	1	39	3 19	New Repaired	17,607	6,340	991 cu. yds. rip-rap, 44 miles grass cut, 26 miles creek cleaned, 749 cu. yds. gravel stock piled.
Sudbury	19.49	245.04	14.55	4.84	13.97	1,363.15	25,448	156.50	5,499	13,568	74.44	988				8,774	360	194		93	10 5	New Repaired	31,303	1,556	25 yds. rip-rap, 2 miles penetration surface, 375 cu. ft. masonry wall, 8 miles concrete expansion joint tar filled, 6,351 cu. yds. field stone hauled and rolled, 470 cu. yds. rock and slag hauled
Temiskaming	18.34	64.11	6.40	0.78	8.75	781.43	18,243	118.72	24,895	63,518	0.50	1,870		1,787		2,655	5,400	59	1	48	19 17	New Repaired	49,185	7,425	2,494 cu. yds. gravel crushed, 21.5 miles of ditches cleaned out, 1,172 cu. yds. rock and stone placed in rip-rap, 3,460 lin. ft. trench dug for sub-drainage
Totals	261.95	1,441.48	278.07	9.84	248.13	4,127.62	487,625	1,138.04	455,544	540,464	273.34	440,228	2,163	11,462	10.78	171,958	90,579	60* 1,624	209	992	146 140	New Repaired	1,091,042	159,059	

*Repaired

REPORT ON CREAMERIES, CATTLE PURCHASE AND SEED GRAIN ACTIVITIES

Carried on under the provisions of The Northern Development Act, R.S.O. 1927, During the Year Ending 31st October, 1929

Creameries (Section 11 D)

The Department continued to assist and encourage dairying in the northern districts by paying the salaries of butter makers at the creameries established at Cochrane, Laroque, Matheson, Moonbeam, Hearst and Lee Valley. The total expenditure was $5,297.18.

Purchase of Cattle (Section 11 H)

During the year 84 dairy cows of good grade type were purchased by the Department for resale to settlers, at a cost of $10,385.49. These were shipped to Cochrane (6); Fauquier, Val Rita and Mattice (40); Matheson (11); and Hearst (27). The prices charged to the purchasers were based on cost, with a fixed sum added to take care of part of the expense of purchase and freight. These prices ranged from $67.00 to $162.00; the average being $115.00.

The animals have given general satisfaction, and the plan which was inaugurated by the Department in 1925 is working satisfactorily and with real and accumulating benefit to the purchasers. The sum of $7,024.33 was repaid during the year on account of principal and interest charges.

Seed Grain (Section 11 F)

The harvest conditions of 1928 in some portions of Northern Ontario left many settlers without seed of good quality for spring planting in 1929. This resulted in a considerable increase in the quantity of seed required to be bought and resold to the settlers by the Department, as compared with the previous year. The distribution included 16,971 bushels of oats; 562 bushels of wheat, and 3,481 bushels of barley at a cost of $35,534.42.

One of the chief difficulties experienced, particularly in the District of North Cochrane, has been in producing oat seed locally of sufficiently good germinating standard. The Department conducted experiments in 1928 with the recently produced Alaska oat, which matured two weeks earlier than other varieties. The experiments were successful, and the Honourable the Minister authorized the purchase of 1,331 bushels of Alaska seed which was distributed to purchasers in the districts of North and South Cochrane.

The result was gratifying to the settlers and to the Department, as not only did the crop ripen well, but the time of harvesting operations was so far advanced that the farmers were able to complete their plowing in the fall and thus gain an additional advantage in having their land ready for spring seeding. Many of the settlers have sufficient of their home-grown seed to meet their requirements for 1930.

The success of the Alaska oats has resulted in a demand from other portions of the north, and it is proposed to extend southerly the area over which this variety will be distributed in the coming spring.

F. G. Beardall,
Acting Chief Clerk.

Toronto, February 2nd, 1929.

REPORT OF SETTLERS' LOAN COMMISSIONER

THE HONOURABLE WM. FINLAYSON,
Minister of Lands and Forests,
Parliament Buildings,
Toronto, Ont.

Dear Sir:—

I have pleasure in herewith presenting the Report of the Settlers' Loan Department, to the 31st October, 1929.

You will observe from the Statement in taking everything into consideration, the payments on interest and principal, are not very much below the previous years.

Yours very truly,

F. DANE,
Settlers' Loan Commissioner.

January 10th, 1930.

STATEMENT OF LOANS ISSUED

TO OCTOBER 31ST, 1929

Total Number of Applications Received:		
To October 31st, 1928	6,839	
Year ending October 31st, 1929	376	
		7,215

LOANS

Total Number of Loans Issued:		
To October 31st, 1928	4,066	
Year ending October 31st, 1929	181	
		4,247
Amount granted		$1,458,755 00
Average Loan		343 72
Amount applied for		2,854,707 00

MEMORANDUM OF LOANS TO CREAMERIES AND OTHER LIKE ASSOCIATIONS

INCLUDED IN THE ABOVE STATEMENT

TO OCTOBER 31ST, 1929

Applications and Loans

	Amount Granted	Amount Owing
The Sudbury Co-operative Creamery Co., Ltd.	$24,000 00	$13,000 00
The Kenora Dairy Co-operative Association, Ltd	13,000 00	13,000 00
Producers Co-operative Creamery Co., Ltd., Lavallee, Ont	3,500 00	1,866 67
The Matheson Co-operative Dairy Co., Ltd	6,730 00	4,276 63
The Cochrane Co-operative Dairy Co., Ltd	7,830 00	6,048 09
Northern Co-operative Company, Ltd., Rydal Bank, Ont	5,000 00	3,500 00
The Thunder Bay Co-operative Dairy, Ltd	14,570 00	14,570 00
Total	$74,630 00	$56,261 39

NOTE.—The standing of the Kenora Dairy Co-operative Association, which went into liquidation in 1922, and all property now under jurisdiction of Department of Northern Development, as outlined in our report of 1924, is as follows:

Principal	$13,000 00
Accrued Interest	1,451 70
Total	$14,451 70

PAYMENTS ON ACCOUNT OF INTEREST

	Accrued Interest Due	Interest Received	Per Cent.
Loans to Settlers	$378,332 12	$338,281 85	89.4
Loans to Creameries	14,349 41	13,217 12	92.1
Total	$392,681 53	$351,498 97	89.5

On Account of Principal

	Payments on Principal Due	Principal Received	Per Cent.
Loans to Settlers	$1,048,732 43	$865,796 61	82.6
Loans to Creameries	37,631 70	18,368 61	....
Total	$1,086,364 13	$884,165 22	81.5

Total

	Payments Due	Payments Received	Per Cent.
Loans to Settlers	$1,427,064 55	$1,204,078 46	84.3
Loans to Creameries	51,981 11	31,585 73	....
Total	$1,479,045 66	$1,235,664 19	83.6

Interest charges	$392,681 53
Interest payments	351,498 97
Balance as per Ledgers	$41,182 56

SUMMARY OF EXPENSES TO OCTOBER 31st, 1929

	To October 31st, 1928	Year Ending October 31st, 1929	Total
Salaries	$106,816 57	$9,441 59	$116,258 16
Travelling Expenses	1,099 85	....	1,099 85
Office Expenses	10,617 09	629 86	11,246 95
Outside Expenses	2,439 28	699 15	3,138 43
	$120,972 79	$10,770 60	$131,743 39
Refund on Over-payments	53 92	....	53 92
Totals	$121,026 71	$10,770 60	$131,797 31

Appropriation	$165,000 00
Less	131,797 31
Balance	$33,202 69

STATEMENT OF LOANS ISSUED AND OUTSTANDING

District	Issued		Outstanding		
	No. of Loans	Issued	No. of Loans	Unpaid Principal	Unpaid Interest
Algoma	190	$66,635 00	129	$32,273 81	$1,638 39
Manitoulin	14	5,750 00	7	1,349 45	....
Nipissing	243	84,245 00	164	39,349 80	2,464 72
Sudbury	263	122,095 00	156	52,585 73	1,665 75
Kenora	441	153,315 00	254	64,763 38	4,869 70
Rainy River	314	106,200 00	164	35,287 57	1,769 88
Temiskaming	1,834	596,730 00	926	216,091 05	15,292 39
Thunder Bay	948	323,785 00	514	132,888 99	13,481 73
Totals	4,247	$1,458,755 00	2,314	$574,589 78	$41,182 56

ENGINEER'S REPORT

On the Operations of the Colonization Roads Branch During the Fiscal Yeat Ending October 31st, 1929

Expenditures under the Colonization Roads Act were made in the northern townships of the counties of Addington, Frontenac, Hastings, Lanark, Leeds, Ontario, Peterborough, Renfrew, Simcoe, Victoria nad Haliburton, and town ships in the districts of Muskoka, Nipissing, and Parry Sound. The work was under the supervision and direction of nine Departmental Inspectors.

A large proportion of the expenditures was on permanent works but the maintenance and improvements of all main roads was given consideration.

Municipalities were encouraged by the Department to pass road by-laws, machinery by-laws, and road overseer by-laws, and in all cases where the by-laws met with Departmental approval and where the work was satisfactorily done the municipalities were reimbursed through the authority granted under the Act.

In unorganized townships assistance was given to the settlers by direct 100 per cent. grants from the Department to carry on needed improvements on their roads and in many instances municipal by-laws were supplemented by direct grants.

One hundred and nine municipalities benefited under road by-laws; 62 purchased equipment under road machinery by-laws; 37 appointed road overseers under by-laws and 155 townships were assisted by direct grants.

A summary of the work performed indicates that 61.2 miles of new road were graded; 1,197.6 miles of existing road were regraded; 143.0 miles of road were gravelled for the first time and 657.5 miles were regravelled; 40.7 miles were surfaced with crushed rock; 2,132 culverts were installed; 69 new bridges were erected and 24 were repaired; 19,863 cubic yards of rock and 154,479 cubic yards of other material were excavated.

Direct Grant Work

In the municipalities where direct grants were expended employment was given to 7,747 men and 2,317 teams. The work included cutting new road 21.9 miles; sidebrushing old road 88.3 miles; stumping and grubbing 24.9 miles; grading 37.6 miles; regrading 117.9 miles; ditching 50.5 miles; surfacing—with gravel, new road 81.8 miles, old road 155.6 miles, with clay 6.0 miles, with crushed stone 12.8 miles; dragging 2,145 miles; guard-rail erected 2,175 lineal feet; culverts installed—wood 426, stone and concrete 151, metal 91; bridges—erected 17, repaired 9; excavation—earth 103,294 cubic yards, rock 13,802 cubic yards.

Road By-law Work

Municipal by-laws employed 11,561 men and 5,804 teams. The work consisted of cutting new road 15.5 miles; sidebrushing 192.5 miles; stumping and grubbing 21.2 miles; grading new road 23.6 miles; regrading old road 1,019.7 miles; ditching 49.5 miles; surfacing—with gravel, new road 61.2 miles, old road 501.9 miles, with clay 21.6 miles, crushed rock 27.9 miles; dragging 3,834 miles; guard rail erected 3,982 lineal feet; culverts installed—wood, 1,078, stone or concrete 215, metal 170; bridges—erected 52, repaired, 15; excavation—earth 51,185 cubic yards, rock 6,061 cubic yards.

Road Machinery and Equipment By-laws

Machinery and equipment purchased by municipalities under by-law, included graders, drags, shovels, lumber, gravel, cement, etc., and the Departmental contribution was on a basis of 25 per cent. of the total expenditure under the by-law.

Road Overseer By-law

Municipalities which appointed road overseers under by-law were reimbursed to the extent of 50 per cent. of the total amount paid under the by-law but not exceeding $400.00 and where the road overseers were employed the work was more uniform and generally was more economically accomplished.

Expenditures

Construction, maintenance (including machinery and equipment)	$233,165 34
Colonization roads by-laws	153,769 14
Inspection	17,877 27
Storage and insurance	311 20
Engineering and surveying	316 46
Salaries—travelling and other expenses unprovided for	125 50
	$405,564 91

Roy G. Sneath,
Engineer, Colonization Roads.

Toronto, January, 1930.

Ontario Department of Agriculture

REPORT

OF THE

Minister of Agriculture

Province of Ontario

FOR THE YEAR ENDING OCTOBER 31, 1929

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO
SESSIONAL PAPER No. 30, 1930

ONTARIO

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1930

PRODUCED BY
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TORONTO
CANADA

REPORT
OF THE
Minister of Agriculture for Ontario
1929

To His Honour W. D. Ross,

Lieutenant-Governor of the Province of Ontario.

May It Please Your Honour:

I have the honour to submit the Annual Report of this Department for the fiscal year ending October 31st, 1929.

Owing to the unusual distribution of moisture, the season was one of the most unsatisfactory experienced by this Province for many years. The prevailing conditions are perhaps best illustrated by the figures of rainfall as compiled at the Ontario Agricultural College and which are as follows for the season:

Period	April	May	June	July	Aug.	Sept.	Total
	inches	inches	inches	inches	inches	inches	inches
1929 (1 year)	5.29	3.72	1.22	3.68	1.14	.83	15.88
1900–1929 (30 years)	2.63	3.03	2.89	3.72	3.06	2.69	18.02

These figures fairly well indicate the conditions which were pretty general throughout Western Ontario. Eastern Ontario, which had suffered more severely in the immediately preceding year or two, was not quite so bad, while many sections of Northern Ontario, which had had two or three bad seasons, were much more favoured and experienced a fairly good year. It will be noticed that the trouble was caused not so much by a deficiency of rain throughout the season as because of irregular distribution. The total for the season was only about two inches less than the thirty-year average but a glance at the rainfall in the different months indicates a wide variation. April had practically double the usual amount, while June, August and September had less than half the usual amount, September being the driest experienced for a long time.

Along with these weather conditions there were market fluctuations which resulted in decreased prices for farm commodities in many lines and therefore, decreased the returns to the farmers. The following figures have been issued by the Federal Bureau of Statistics, giving the values of farm commodities for the past year with comparative figures for the previous year:

	1928	1929
Field crops	$243,768,000	$241,778,000
Farm animals	75,908,000	76,022,000
Wool	1,502,000	1,323,000
Daily products	116,345,000	115,300,000
Fruit and vegetables	19,658,000	19,208,000
Poultry and eggs	45,993,000	44,773,000
Fur farming	748,000	968,000
Maple products	1,888,000	1,258,000
Tobacco	5,823,000	5,039,000
Flax fibre	509,000	393,000
Clover and grass seed	2,314,000	1,672,000
Honey	1,267,000	1,700,000
	$515,723,000	$509,434,000

This is presented as an estimate and it would not be surprising if further corrections resulted in a substantial downward revision of the total agricultural revenue for the year.

Under the different heads under which the Department is organized will be found a brief statement of the work being carried on during the year. It will be noticed that the interest is well maintained and the various phases of educational activity are accomplishing excellent results. There have been a number of new and important developments in different branches of the work during the year and these are outlined and will be found to be of much interest.

All of which is respectfully submitted,

JOHN S. MARTIN,
Minister of Agriculture.

ONTARIO AGRICULTURAL COLLEGE

By far the most important building programme in connection with the Ontario Agricultural College since its establishment fifty-five years ago, was inaugurated this year. In point of dollars and cents the amount involved is several times as much as the initial expenditure in establishing the institution but this is more an indication of the changed conditions of modern times than anything else.

When the College was established, the farm residence on the stone farm, which was purchased, was used for office and residential purposes. It was a very good building of its kind, being composed of limestone. With this as a starting point, the main buildings of the College were erected. This building was extended from time to time and wings added in later years. It was necessary later to modernize the building by the addition of sanitary conveniences and electric lights and with the extensions the building provided accommodation for the administrative offices of the President and the Registrar and for upwards of three hundred students. One end of the building was used for many years as the residence of the President. With its attractive entrance and tower and with the walls covered with ivy as the year went by, the building was an attractive feature of the College and served as the centre of thousands of pictures. It was, moreover, deeply established in the affections of the students who had occupied it throughout the years and it was with the greatest reluctance that the problem of removing it was dealt with.

However, the years take their toll and are no respecter of persons or of buildings. Several times in recent years the matter of improvements has been under consideration and the reports of the architects always stated that the walls would not stand any extensive repairs. A year or so ago the Fire Marshal's Department had occasion to investigate the College equipment and it was reported that this building was actually a fire trap which hazarded the lives of the students who occupied it.

Under these circumstances there was no alternative. The site is properly the centre of the College buildings and it was very desirable that it should continue so. The old building, therefore, with all its associations, had to make way for something more modern and adequate to the growing needs of the institution. The old building has now entirely disappeared. The new building, which will occupy the same site, will be a five-storey modern structure. Its erection is, of course, under the supervision of the Department of Public Works and the contract has been let to the leading firm of Jackson and Lewis, which has erected a large number of big buildings, including the East Block of the Parliament Buildings. Queenston stone is being used so that it will blend with the other stone buildings on that part of the campus. Its entrance and tower will not be unlike the entrance and tower of the old building. It is being erected in units and only the first unit is at the present time contracted for. It will provide accommodation for the President, Bursar and other administrative officers of the College. There will be an extensive basement, which did not exist in the old building, and this basement will provide accommodation for a number of students' organizations and also for a cafeteria, which will be needed to supplement the facilities of the dining hall. The balance of the building will be given over to the needs of the students' rooms for residence and some rooms for reception and social purposes. The other two units will, no doubt, follow after the completion of the first unit, and when completed there will be accommodation for upwards of four hundred students. This building will not only be modern but will be so well constructed that it should prove permanent for hundreds of years.

In connection with these building plans, it was necessary to change the heating plant. The old heating plant had grown up piece by piece over a number of years and was located immediately back of the residence. It had gradually spread over a considerable area and it was not only in the way of extension of the buildings but was so far from modern that in planning a change it was considered necessary to build an entirely new plant. This is being done just at the foot of the hill behind the main building. It is quite convenient and yet it is out of the way and will permit the space on the hill immediately behind the main building to be used for other much needed purposes. The water tower, which arose near the old main building and was an inartistic part of the landscape in so many pictures of the Institution, has also been removed to a hill among the experimental plots. It will be just as high as formerly and, therefore, just as serviceable but it will not be so conspicuous.

Other Buildings

Along with this extensive and somewhat revolutionary programme there are other buildings in progress. The splendid new Horticultural Building, which was started last year, is nearing completion and will be ready for use early next year. It is constructed of brick with Queenston stone trimmings. It includes classroom and laboratory facilities. A special feature is the cold storage plant of eleven rooms, which will provide facilities for experiments in the handling and holding of fruits and vegetables at different temperatures. There is also a large room in the basement for machinery where demonstrations with spraying and other machinery may be carried on.

What is known as the Graesser house, a large brick residence near the College property, has been purchased and will be ultimately used for an additional residence in connection with Macdonald Institute. The demand for admission to this institution is always about one hundred greater than the accommodation available. This house will provide accommodation for probably forty additional students. It will also be necessary to extend the classroom and laboratory accommodation in Macdonald Institute and plans in this connection are under consideration.

Following the destruction of the old barn by fire, a new barn has been constructed for the use of the Poultry Department. It is a wooden structure on a concrete foundation and is two storeys high. The second storey is used as a large hen-house, housing between four and five hundred full grown birds as in a single pen.

Repairs and improvements, by way of painting and otherwise, were made to many buildings. There were also numerous improvements to the campus, including construction of needed concrete walks in many places.

Cutten Recreation Field

Another development of importance to the College, although not exactly part of the College, is the presentation of the Cutten Recreation Field. Mr. Arthur W. Cutten, a native of Guelph, who has acquired considerable wealth in Chicago, expressed a desire to do something of a permanent nature for his native city and district. As a result of a conversation with the President of the College, he expressed a desire to do something which would also be of value to the College. It was pointed out to him that there was a tract of upwards of 200 acres of land, lying between the College and the City of Guelph and he agreed to purchase this land and develop it as a recreation park. One portion of it to be used as an 18-hole golf course. Work on the construction of the golf course was carried out during the past year and much progress made. Another portion will be used for rugby and other recreational requirements of the students. Another section, near the river, will be used as a picnic ground. The property is being developed under the direction and supervision of a committee named by Mr. Cutten, who is generously financing the enterprise. Other important features will be added and when completed this development will be a great asset to the city and district. Its location makes it of special advantage to the Ontario Agricultural College from very many standpoints and the interest and generosity of Mr. Cutten towards the College is very greatly appreciated.

ATTENDANCE INCREASES

General Course	383	
Specialist in General Course Work	16	
Dairy Courses	136	
Live Stock and Field Crops	183	
Farm Drainage	5	
Poultry Raising	57	
Horticulture	70	
Apiculture	8	
Farm Mechanics	19	
Farm Power	23	
Baking School	31	
Better Seed Course	30	
Spray Service (2 days)	54	
Seed Analysts (one week)	6	
		1,021
Domestic Science (at Macdonald Institute)		493
Girls' Conference (Junior Women's Institute)		209
Home Economics (2 weeks)		16
Summer Courses:		
High School Teachers—1st year, 36; 2nd year, 45	81	
Public School Teachers—1st year, 103; 2nd year, 50	153	
Specialists	6	
Farm Mechanics	10	
		250
Total		1,989

ANALYSIS OF COLLEGE ROLL (GENERAL COURSE), 1929

From Ontario

Algoma	3	Kent	8	Renfrew	4
Brant	7	Lambton	5	Russell	2
Bruce	11	Lanark	6	Simcoe	13
Carleton	20	Leeds	3	Stormont	1
Dufferin	4	Lincoln	10	Temiskaming	2
Dundas	2	Middlesex	8	Thunder Bay	6
Durham	7	Muskoka	1	Victoria	3
Elgin	7	Northumberland	1	Waterloo	3
Essex	9	Norfolk	6	Welland	9
Glengarry	2	Ontario	4	Wellington	37
Grenville	2	Oxford	12	Wentworth	18
Grey	3	Peel	9	York	36
Haldimand	1	Peterborough	7		
Halton	7	Perth	11		
Hastings	5	Prince Edward	1		
Huron	8	Prescott	1	Total from Ontario	325

From Other Provinces of the Dominion

British Columbia	8	Nova Scotia	1	Total from other Provinces	13
New Brunswick	2	Quebec	2		

From Other Countries

Bermuda	1	Mexico	1	U.S.A.	4
England	20	Ireland	1	Wales	3
Japan	1	Newfoundland	1	Scotland	7
Holland	1	South Africa	2	Ukraine	1
Switzerland	1	Trinidad	1		
				Total from other Countries	45
Total					383

For the first time in several years the attendance in the first-year class exceeded one hundred at the term opening in September last.

College Farm

The College farm is under the supervision and management of the Department of Animal Husbandry. This past year the farm yielded an excellent crop of hay. While the grain crop was short in straw the yield was fairly high and the quality was good. Owing to the severe and extended drought the corn and root crops were exceedingly light and the short pasture in the late summer and early fall necessitated the feeding of the animals in the barns during the latter part of September and October.

The number of live stock has been not only maintained but increased. Four Clydesdale and three Percheron colts were raised from mares maintained on the farm. Thirty calves were born in the Beef herd, of which twenty-five were males. Three high-class Hereford Heifers were purchased to replace some of the older cows. A young Shorthorn bull was purchased for use as a Junior Herd sire. This animal is a double grandson of Millhills Comet, the sire of Thornham Minstrel the International Senior Champion in 1927.

The Dairy Herd has made progress during the year. The Holsteins averaged over 13,000 pounds of milk per cow. The animals in this herd, with the exception of three, have been bred at the College. Another item of interest is that the butterfat test is unusually high. Four Jersey cows and one bull and one cow of the Ayrshire breed were purchased during the year.

The entire lamb crop was used in research work in parasitic control. It is now planned to increase the flock and to give sheep a more important place on the farm. A small breeding flock of Southdowns and Hampshires have been established. For classroom work the farm maintains ten breeds of sheep: Shropshires, Hampshires, Southdowns, Leicesters, Oxfords, Dorsets, Cheviots, Suffolks, Cotswolds and Lincolns.

Excellent results are being secured with swine. The Yorkshire boar, Pine Grove Glory 39, has been used for the past two years and has proved an outstanding sire. He has secured not only high-class breeding stock but the pigs are showing results when used for bacon purposes. The herd was reinforced by the purchase of Wiltdale Excelsior from the Manitoba Agricultural College. This animal was Grand Champion at the Royal Winter Fair in 1927. The Tamworth sire was Junior Champion at the Royal Winter Fair in 1927. He is proving an outstanding animal and is producing a lot of excellent stock.

Field Crop Experiments

In 1929 there were one hundred and six definite and distinct projects under investigation in the experimental field at the College. A number of these projects were under investigation for the first time in 1929. No single factor is of greater importance in increasing crop production and improving the quality of the crops grown than the variety sown. From a very large amount of experimental work done in 1929 and in previous years in testing of varieties of field crops the Field Husbandry Department is prepared to recommend the following varieties for the average soil and climatic conditions of Ontario:

Winter Wheat	O.A.C. No. 104, Dawson's Golden Chaff (O.A.C. No. 61). Red Rock.
Winter Rye	Rosen.
Winter Vetches	Hairy.
Oats	O.A.C. No. 144, O.A.C. No. 72 and Banner (late maturing varieties). O.A.C. No. 3, Alaska (O.A.C. No. 157) (early maturing varieties). Liberty Hulless.
Barley	O.A.C. No. 21.
Spring Wheat	Marquis and Mindum.
Spring Rye	O.A.C. No. 61.
Field Peas	O.A.C. No. 181, Potter, Canadian Beauty, and Arthur.
Field Beans	Robust, Yellow Eyed Marrowfat.
Soy Beans	O.A.C. No. 211.
Buckwheat	Silver Hull and Rye.
Dent Corn	Wisconsin No. 7, White Cap Yellow Dent, Golden Glow, Bailey.
Flint Corn	Longfellow and Salzer's North Dakota.
Sorghum	Early Amber.
Sunflowers	Mammoth Russian.
Mangels	Yellow Leviathan (O.A.C. No. 2).
Sugar Mangels	Giant White.
Swede Turnips	Perfect Model and Canadian Gem.
Millet	Hungarian, Siberian (O.A.C. No. 92).
Pasture Rape	Dwarf Essex.
Cabbage	Earliest Drumhead.
Early Potatoes	Irish Cobbler.
Late Potatoes	Dooley and Green Mountain.
Alfalfa	Ontario Variegated and Grimm.
Red Clover	Ontario-grown seed.
Alsike	Ontario-grown seed.
Sweet Clover	White Blossomed Biennial. Yellow Blossomed Biennial.
Grasses	Timothy, Orchard and Meadow Fescue.

AGGRESSIVE SOIL PROGRAMME

Recognizing that the maintenance of soil fertility is one of the basic requirements of permanent agriculture, a comprehensive programme has been inaugurated with this object in view.

It includes two lines of work—the making of surveys to determine present soil conditions and the carrying out of extensive fertilizer tests.

Soil survey work is a slow process because of the vast amount of detail involved. Furthermore, the number of men with the necessary training to do this work is quite limited. During the year progress was made with the work in Elgin County and some preliminary work was done in Algoma and Thunder Bay Districts. Laboratory examination was made of hundreds of sample sent in by individual farmers. A special study is being made of pasture lands of which there are over three million acres in this Province.

In the use of commercial fertilizers a large number of field experiments have been carried out. An important advance has been made in the co-ordination of efforts. Commercial organizations have contributed financially and with all work under the supervision of the Chemistry Department there is a greater uniformity of effort and of result than ever before.

TRENT INSTITUTE

The School of Baking, operated under the Chemistry Department, graduated twenty-four students and has an enrolment of thirty-six. It is closely identified with the commercial industry and its students are all apprenticed bakers who have completed at least twelve months practical work in a commercial shop. The accommodation available is usually spoken for considerably in advance of the opening of each course.

In addition to teaching, much investigational work is carried on. A study is being made on "Flour Granulation and the Factors Governing its Control." Another study is being made to ascertain what qualities make a flour most suitable for cake-making.

In co-operation with the milling industry chemical analyses, milling and baking tests were made on 789 samples of wheat and flour. Samples of bread and cake are frequently received from the bakers for scoring.

Tests made of the wheat grown in Western Canada last year showed that it graded higher than the crop of the previous year, which was so much greater in quantity. A baking test of flour from the new Garnet Wheat produced a bread darker in colour but superior in flavour to standard grades. A blend with standard varieties eliminated the colour but retained the flavour.

POULTRY WORK

In its practical work and its research activities the Poultry Department has shown remarkable development in recent years and has many important projects under way.

About a year ago there was considerable newspaper publicity on the question of the possibility of controlling the sex of chickens by the use of the X-ray. Mr. Hadley, of New York, was of the opinion that he had a plan that would accomplish the desired result. Arrangements were made with Dr. G. E. Richards of the Department of Radiology, of the Toronto General Hospital, whereby a considerable number of eggs were X-rayed by Dr. Richards, following the personal directions of Mr. Hadley. The results showed that the X-ray treatment did not interfere with the hatch of chicks, since the eggs submitted to X-ray hatched as well as the control group of eggs. The chicks from the X-rayed eggs and the chicks from the control eggs were reared with, practically, no difference in growth or sex. Males and females were bred this season with equal results.

An attempt was made last year to unsex males with the use of X-ray. This work was undertaken in co-operation with Dr. Richards. The X-ray failed to unsex the male, and the surviving males so treated bred satisfactorily.

For some years the department has been making a study of animal proteins as they may effect the hatching power of fertile eggs. During the years 1928 and 1929, this project has been carried on in co-operation with the Empire Marketing Board.

A general summary of the practical results to date may be given as follows:

(*a*) Milk is the best single source of animal protein;

(*b*) A combination of milk with beef scrap or fish meal is at least equal to any of the single sources of protein;

(*c*) Tankage is the poorest single source of animal protein under test. This material is not recommended by the packers as a poultry feed, but is fed to hens by some people. The feeding trials do not warrant its use.

(*d*) Where hatching eggs are wanted before April, the percentage of fertile eggs hatched has been considerably increased by the adding of one pint of cod-liver oil to each hundred pounds of mash fed.

(*e*) Eggs for hatching, produced from pens where fish meal alone was fed as a source of animal protein, were not improved by the addition of cod-liver oil.

(*f*) Sunshine is an important factor in producing good hatchable eggs. The results obtained suggest that an average daily sunshine of five hours, where the hens are housed in an ordinary pen, is about the amount required. This amount is generally available during April hence cod-liver oil is not required under ordinary conditions after April 1st.

The influence of meat scrap, tankage, cod-liver meal, fish meal and buttermilk powder on growth of chicks in confinement has been investigated with the following results:

(1) Repeated attempts have failed to grow normal chicks when one or other of these protein supplements forms the *sole* source of protein in an otherwise adequate synthetic diet. Only in the case of buttermilk powder was normal growth obtained, complete success being prevented by the incidence of extreme leg weakness.

(2) Leg weakness, the most serious difficulty to be contended with in the rearing of chicks in *confinement* has been studied by the use of synthetic diets and ordinary poultry rations. Blood serum calcium and phosphorus, ash determinations and radiographs of the femur and tibia of leg weak chickens has shown that this is apparently not a rachitic condition.

(3) The usual feed analysis has been made on different samples of each of these products. Inorganic analysis, embracing silica, P, Ca, Mg, Fe, Na, K and Cu determinations of the ash have been completed. The tyrosine and tryptophane content of the protein of these materials has been determined by different methods. These results have not, so far, thrown any light on the differences in the nutritional value.

(4) Supplementing the same basal ration with three per cent. protein from buttermilk powder gave better growth, greater egg production and a higher percentage hatchability than six per cent. protein from either fish meal, meat scrap or tankage.

(5) The protein supplement fed has no effect on the tyrosine, tryptophane, cystine, iron and phosphorus content of the proteins of the white and yolk of the eggs, these being relatively constant.
The copper content of different eggs from hens receiving the same ration has been found to vary more than 100 per cent.

(6) The digestibility co-efficient of the crude protein of these materials was as follows: Buttermilk powder, 64.8; fish meal, 59.2; tankage, 94.6; and meat scrap, 97.7

TURKEY FARM

About one thousand turkeys were hatched and reared this season at the special turkey farm operated in Norfolk County by the Poultry Department. The results this year confirm the observations of other years that it is essential to feed the turkeys good feed from a trough and none from the ground. The land near the buildings, or where the turkeys stand about daily, is not clean enough to scatter feed about without encouraging disease. It is a good practice to move the feed trough and the drinking vessels daily.

During the breeding season where breeding pens of turkeys are separated by an ordinary wire fence, the percentage of fertile eggs is considerably decreased. It appears to be advisable to sparate the yards, or to use a tight fence between the pens.

When young turkeys are grown on a good ration and are well grown, they reach a marketable weight in about five months' time. An equal number of males and females have given an average live weight of about thriteen to fourteen pounds each.

There is some demand for dressed turkeys earlier than "Thanksgiving Time." There has been a good demand for finished turkeys since early in October.

The four-yard plan has grown the most even group of turkeys this year. Birds are changed from one yard to the adjoining yard each week, coming back to yard one at the end of the fourth week.

Pools of stagnant water, manure piles, etc., are undesirable in the range for turkeys.

BREEDING STATIONS

During the year 1928-29, establishment of the present system of Poultry Breeding Stations was inaugurated, and 193 flocks were entered, containing a total of 59,292 birds. Of this number thirty flocks, containing 9,530 birds were withdrawn before banding. Various reasons existed for these withdrawls, but the majority of these were withdrawn at the recommendation of the inspector. Either the birds or housing conditions were not considered satisfactory for proceeding with the work at the time. The owner was advised to wait another year to make entry, and advice was given as to improvements which might be made in stock and conditions to render these satisfactory for operating a breeding station.

The birds in 163 flocks, containing 42,195 birds, were banded, and in the banding of same, 13,047 birds were culled out. In the interval between the banding and blood testing, two additional flocks were withdrawn, the owners feeling that they were even then not in a position to continue with the work.

One hundred and sixty-one flocks, containing 40,433 birds, were blood tested. In three of these flocks, the blood test was not completed as the samples were spoiled in transit. These were located in Cochrane District.

Of the birds blood tested, 3,230 birds reacted. Nineteen flocks containing 2,676 birds were free from reactors. The flock showing the heaviest percentage of reactors contained sixty-one per cent.

From the time of the blood testing until the close of the year on these flocks, ten additional flocks were withdrawn. In some cases, due to illness in the owner's family, in other cases a pressure of other work, making it impossible to keep up the records, and in still others, the birds had been sold.

During the year, four breeding stations were cancelled, due to the operators not complying with the rules and regulations governing the stations, particularly in the complete failure to send in the records of the flock.

Of the 147 flocks remaining at the end of the first year, 130 of them made entry for the second year in the breeding station project.

In addition to the extension workers carrying on four, and in some cases more, inspections on these flocks during the year, the following programme of culling work was carried out.

Four culling schools, lasting two to four days, were conducted, and one hundred and twenty-six culling demonstrations were put on, at which there was an attendance of 1,825 people, and in connection with which 16,941 birds were culled, and approximately 5,000 culls were removed.

Further, numerous emergent calls were taken care of, and poultry men visited who were having difficulty with the flocks.

Several weeks were spent by the various men in inspecting hatchery plants throughout Ontario.

CHEMICAL WEED KILLERS

This summer a series of experiments was begun to test the efficiency of the various chemical weed killers which are being advertised and sold in the Province. These experiments were conducted by a special student in botany, under the direction of the staff of this department. The following were the substances tested: Sodium chlorate, Bortex, Weed-Cop, Perfectso, Atlas Non-poisonous Weed Killer (dry and liquid), Gas Lime. The following are the chief weeds that were experimented on: Field Bindweed, Twitch Grass, Canada Thistle, Perennial Sow Thistle, White Cockle, Poison Ivy.

No definite conclusions can be drawn from one year's results, but even one year's results give some indication of the effectiveness of the weed killers experimented with. Poison ivy was killed by one application of Atlas Weed Killer in the powdered form. White Cockle was apparently killed by one application of sodium chlorate applied when the plants were in full bloom. One or two applications of sodium chlorate and Weed-Cop killed Canada Thistle. It was most easily killed by both these substances if they were applied when the thistles were in full bloom. Six applications of sodium chlorate apparently destroyed most of the Twitch Grass in a city lot which was badly overrun with it. How completely the Twitch Grass has been destroyed in this lot cannot be determined with certaintiy until next spring. The sodium chlorate was apparently most effective in killing Twitch Grass when applied when the grass was in flower or just coming into flower. The chief objection to most of the chemical weed killers is their high cost.

ADMINISTRATION OF THE CORN BORER ACT

In administering this Act the Entomologist has kept two main objects in views—first, to see that a good clean-up of all corn remnants is made each year with as little friction as possible; and second, to simplify and lessen the work of the farmer by finding out better and easier means of cleaning up corn fields. In this latter object we believe we are making real progress and hope that we may soon be able to recommend to the farmers a low-cutting device at a low price, which, if properly used, will make hand-picking of stubble unnecessary except where the farmer is careless and makes no effort to help himself.

The results of this last season's work against the borer in the area under the Act has on the whole been gratifying. It is true that in Essex and Kent and a few other localities in some other counties there are just about the same number of borers as last year, yet in the twenty-four counties as a whole, there has been a decided decrease. In Norfolk and Welland the decrease was over sixty-six per cent. and in the ten counties, Lambton, Middlesex, Elgin, Norfolk, Haldimand, Welland, Lincoln, Wentworth, Brant and Waterloo, the average decrease was approximately fifty per cent. In all counties not under the Act there has been, so far as we can judge, an increase.

DRAINAGE PROGRESSES

The demand for assistance in drainage still keeps ahead even of the efforts of an ever-increasing staff. The following table gives a summary of the field surveys made during the year:

County	Number of Surveys	Acres	Feet
CENTRAL ONTARIO			
Algoma	2	70	....
Bruce	1	....	3,800
Durham	1	15	....
Grey	1	....	1,900
Huron	17	758	1,700
Ontario	4	75	1,200
Oxford	9	50	2,740
Perth	29	224	20,055
Peterborough	2	100	3,200
Rainy River	1	....	700
Simcoe	17	538	6,200
Victoria	2	....	3,700
Waterloo	10	245	2,000
Wellington	8	152	57,200
York	14	328	10,900
EASTERN ONTARIO			
Carleton	10	740	5,280
Grenville	7	40	36,960
Glengarry	11	150	131,240
Hastings	5	120	7,000
Lanark	5	79	5,280
Leeds	4	180	11,880
Lennox and Addington	2	....	18,480
Northumberland	4	55	4,800
Prince Edward	1	....	1,600
Russell	6	485	....
SOUTHERN ONTARIO			
Brant	1	....	1,600
Haldimand	11	285	8,000
Halton	15	200	36,400
Lincoln	27	562	52,800
Norfolk	10	99	7,500
Peel	10	189	8,270
Welland	1	....	....
Wentworth	34	152	57,200
WESTERN ONTARIO			
Elgin	22	329	15,884
Essex	14	895	2,640
Kent	37	1,402	12,590
Lambton	24	1,385	41,240
Middlesex	7	176	7,640

Total number of surveys	386
Total number of acres surveyed	10,078
Total number of feet of profile	589,579
Total number of feet of tile required for plans and profiles	3,249,230
Number of inspections made	39
Number of applications on hand, October 31, 1929	116

ONTARIO VETERINARY COLLEGE

For the session ending April 30th, 1929, a total of eighty students were in attendance, of which twenty-four were in the first year class, nineteen in the second year class, eighteen in the third year class and nineteen in the senior class. Of the senior class, eighteen candidates were successful in passing the final examinations and received the degree of Bachelor of Veterinary Science (B.V.Sc.) conferred by the University of Toronto, at a special convocation held on April 30th, 1929.

During the present session, which commenced October 1st, 1929, a total of eighty students are registered, of which twenty are in the first year class; twenty-five are in the second year class; nineteen are in the third year class and sixteen are in the senior class. Students are in attendance from each of the provinces of Canada, as well as from other parts of the British Empire, and from the United States. It is also worthy of mention that all of our recent graduates have been successful in passing the civil service examinations for appointment as veterinary inspectors both in Canada and the United States.

During the year many requests were received from time to time to investigate diseases of an unusual nature. As a result, members of the College staff, in addition to their regular class work, had to undertake considerable special investigational and research work. Some further studies have been carried out in relation to anemia of young pigs, arthritis of pigs, cirrhosis of the liver in horses, infectious abortion of cattle, osteomalacia of cattle, parasitic diseases. A number of special articles relating to some of the studies undertaken are embodied in the general report. Considerable attention has been paid to the diseases of foxes, which constitute a growing industry in this Province.

Increasing demands are being made on the College by veterinarians and live stock owners throughout the Province for assistance in combating animal diseases of various kinds, both for the diagnosis and treatment of diseases. As a result a wider use is being made of laboratory facilities for both histo-pathology and bacteriological examinations. In all cases the specimen received is carefully examined and a detailed report of the findings is sent to the one directly concerned. A steadily increasing number of agglutination tests (blood tests) are being made for the diagnosis of pullorum disease in poultry, and for infectious abortion in cattle, as well as the microscopical and bacteriological examination of diseases specimens of all kinds, including parasitic specimens. During the year a steady stream of enquiries have been received relating to infectious abortion of cattle. These enquiries have entailed a vast amount of personal correspondence. Over one thousand letters have been received and answered relating to abortion and sterility in cattle. Further encouragement is being given to make use of the available facilities for the blood testing of cattle for this disease and for the control of the disease in individual herds. As an illustration of the service rendered in connection with blood serum examinations, the following figures may be of interest:

Animal	Disease	Number of Samples Received	Positive	Suspicious	Negative	Unfit for Testing
Fowl	*S. pullora* infection....	30,472	2,184	35	27,767	486
Cattle	Infectious abortion....	3,265	1,043	505	1,657	60

In addition there were 2,130 specimens sent in for bacteriological and other examinations and of these, 1,971 were of poultry and fifty-four cattle.

PUBLICATIONS AND STATISTICS BRANCH

The work of compiling agricultural statistics was carried on in co-operation with the federal authorities. The results are published from time to time as completed.

The distribution of the annual reports has been continued and the following are the figures of the numbers printed for distribution:

Minister's Report	3,000
The Ontario Agricultural College	2,500
The Experimental Union	50,000
Agricultural Societies and Field Crop Competitions	10,000
Horticultural Societies	20,000
Vegetable Growers' Association	5,000
Ontario Veterinary College	4,000
Agricultural Development Branch	3,000
Stallion Enrolment Board	4,000
Agricultural Statistics	15,000
Fruit Growers' Association	4,000
Entomological Society	3,000
Beekeepers' Association	4,000
Women's Institute	40,000
Total	167,500

The following crop bulletins have been printed for distribution:

177 December, 1928	30,000
178 April, 1929	3,000
179 May, 1929	3,000
180 August, 1929	4,000

Other bulletins printed for distribution were:

*337 Parasites Injurious to Sheep	20,000
341 Paint and Painting	15,000
342 Fire Blight	15,000
343 New Fruits	15,000
344 The More Important Fruit Tree Diseases	20,000
345 Fungus and Bacterial Diseases of Vegetables	20,000
346 Hardy Alfalfa	20,000
347 Hay and Pasture Crops	40,000
348 Amateur Dramatics	25,000
349 Grain Smuts	15,000
Total	205,000

Circulars without serial number:

Weed Act and Regulations	15,000

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*New edition.

AGRICULTURAL SOCIETIES BRANCH

Agricultural societies of Ontario had a most successful year in 1929, due in part to the very propitious weather they experienced during the period when the fairs were being held, but also on account of increased exhibits in the various classes. For some years the Legislative apportionment of $10,000, to meet losses in gate receipts owing to wet weather, has not been sufficient to meet all the claims for wet weather grants, and only a proportionate amounts could be granted to the several societies. In 1929, all claims were paid in full. Five societies received the maximum grant of $500, the losses of the rest being inconsiderable. It was fortunate that some societies had not to make any claim for losses in gate receipts last year, as there were instances where a society had experienced losses for three successive years through bad weather conditions, and its finances had been so strained in consequence that another bad year might have severely crippled them.

The exhibits at fairs were much superior to those of 1928 with the exception of roots and vegetables which suffered from the abnormal weather so generally experienced in many sections of Ontario. A section of the fairs wherein steady improvement is being shown is in the main buildings which accommodate ladies' work, domestic science, dairy products, fine arts, fruits, roots, grain and vegetables. This is a direct result of the standardization of the prize lists of the agricultural societies as approved of by the Ontario Association of Fairs and Exhibitions.

Classes in the horse department which attract much attention are those for thoroughbreds, half breeds and saddle horses and hunters, and a number of fairs are making these classes a special feature, and find it encourages attendance as there is a good demand for these classes. Heavy and light horses were generally shown in satisfactory numbers and much more attention is being given to bringing out cattle into the ring in show condition. In past years this has been sometimes neglected, but exhibitors now realize that it pays to spend time over them and train them to lead quietly and stand so as to make a good impression on the judges.

A number of fairs have erected splendid main buildings and improved housing for horses, cattle, sheep and swine, and are keeping their grounds in good order. Some societies are planting trees and shrubs on their grounds which add greatly to the appearance thereof. Two or three small societies which have found it difficult to finance their fairs have amalgamated with larger ones, and this is a move in the right direction.

The Department arranged to have prepared a number of cuts of outstanding animals of the various breeds, to be used in prize lists. This has added materially to the educational value of the lists.

A large number of judges for Fall Fairs and Field Crop Competitions were supplied by the Department and their decisions, on the whole, were satisfactory, and very few complaints have been received by my department. Reports made by departmental lady judges evidence, not only the desire of Fair Boards to utilize the standard prize lists for ladies' work, fine arts and domestic science, for the arrangement of which your association is entitled to the credit, but give due praise to the great improvement seen in the up-to-date exhibits in the classes mentioned, the work in most cases being modern and of good quality, and characterized by careful detail.

FIELD CROP COMPETITIONS

The Field Crop Competitions continue to do excellent work in bringing before the farmers of Ontario the many benefits they receive when they take part in them, not only from a monetary point of view, but also as the means of getting better seed grain for themselves, and keeping their farms clear of weeds, because instead of sowing thirty-two per cent. of weed seeds as is done by many farmers, as was proved by the Seed Drill Survey of 1928, better seed is being used. The natural sequel to the Field Crop Competitions is the use of seed cleaning machines that will do more efficient work than the old style of fanning mills. There are a number of up-to-date machines in various parts of the Province owned by syndicates and individuals which are available to farmers and outsiders on the payment of a small fee. To those who live at too great a distance from a cleaner considerable improvement in the output can be realized by purchasing and using in their fanning mills sieves of the type of those used in the larger machines. Information as to these will be furnished by the department.

The Seed Cleaning Demonstration Train has greatly assisted in creating interest in the production of first-class grain and seed, and farmers in a reasonable radius of the railway stations where the train stopped had every opportunity to be present and see the cleaners in operation, attend the lectures given by the seed experts in charge of the train, take note of the various noxious weeds, which are becoming so prevalent in this Province, and ascertain the best methods of eradicating and checking them. Over 10,000 farmers visited the train and 2,000 bushels of grain and clover were cleaned in 1929.

The Combined Field Crop and Cleaned Seed Competitions are being taken up by prominent grain growers, and are proving of value in the production of high-class registered seed grain. Several thousand farmers take part each year in the Regular and Combined Competitions.

HORTICULTURAL SOCIETIES

In spite of the unfavourable weather during the earlier months of 1929, with cold rains followed by an unusually hot season, plants and flowers made a good display and continued to do so till late in the year. The membership list is growing at a steady rate. A number of societies have become organized and are carrying on the work of beautification of homes and gardens, and especially rural homes and surroundings.

In the mind of the average man and woman, Northern Ontario is a section of the Province where timber and rocks predominate, varied by clearings in the clay belt, and they are surprised to find what beautiful flowers, and especially Sweet Peas, can be grown in the short summer season where speedy growth is required. The societies in the north are accomplishing much for the improvement of the surrounding countryside, and there are no less than six societies in Manitoulin Island at the present time.

One of the most interesting features of horticulture is the investigation and discovery of new varieties of plants, flowers, and bulbs, by the numerous experts who are constantly engaged in this line of work, and who find themselves well rewarded by the discovery, from time to time, of new and improved varieties which so far excel the parent stock as these latter are superior to those that were planted in gardens previously. In respect of this line of work individuals are greatly indebted to the staffs of our Experimental Stations for valuable assistance and suggestions offered.

Some societies find difficulty in defining who shall make entry in the amateur classes, and who in the professional at exhibitions, and in the judging of lawns and gardens. The question is sometimes not easily solved, but in the Annual Report of the Horticultural Societies of Ontario for 1926, on page 7, there will be found what is probably as reasonable a solution of this difficulty as can be defined. It is as follows: "A professional is one whose garden operations are conducted solely for commercial gain. An amateur is one who grows plants for the love of them, and who does not gain any part of his livelihood from the sale of plants, bulbs, seeds, flowers, etc., and whose garden work is done without the aid of paid labour." Many members of societies are not strong financially, and are not able to dispose of their small surplus of garden products without reasonable return therefor. These small returns for such sale are used in many cases in purchasing newer varieties. These minor transactions should not bar a member from the amateur class.

The influx of tourists in their autos from across the line and also from other provinces continues to show a tremendous expansion, which has largely been brought about by the construction of improved highways to accommodate the traffic. A feature that attracts our American neighbours is the scenic beauty of our countryside as well as the wonderful improvement wrought in urban and rural districts, which is largely due to the work of the enthusiastic horticultural societies. Unsightly bill boards are slowly, but surely, being removed from the landscape, but there are still too many in evidence that disfigure the beauty of our countryside.

Many societies have taken advantage of the offer made by the Department to furnish sets of slides, together with suitable addresses for their meetings, the only cost to the society being the return express charges.

The securing of judges by the societies is a difficult problem. There are no funds at our disposal for the payment of expenses and services of judges to Horticultural Exhibitions; the societies having to arrange for their own. Last year a number of qualified judges were recommended for this work, and when a society applies for a judge, this list is forwarded to the Secretary, who may select therefrom a judge suitable for their requirements. The greatest difficulty seems to be in securing suitable judges in Northern Ontario. When a number of societies in a district hold shows on the same date, it is not always easy to find first class judges for all of them.

A few societies last year discontinued their operations, notwithstanding this, the total number on the roll was the largest in their progressive history, viz., 284. There is certainly something lacking in a community that fails to carry on the uplifting and beneficent work in hand. They evidently fail to understand the effect of gardening propaganda on the little children of those communities which fail to get nearer to the heart of nature and of nature's God.

ONTARIO VEGETABLE GROWERS' ASSOCIATION

The Ontario Vegetable Growers' Association has just attained its majority, and looking back over the years since it was first organized on a very small scale, the members are to be congratulated on the steady advance that has been made both in point of numbers and also in the improvement in quality of the products that their gardens supply, which form such a necessary portion of the food that human beings must use in order to maintain a perfect health through the vitamines which are so freely found in vegetables.

The Bulletin, covering items of interest to vegetable growers, which for two years has been issued by the central office has now, to prevent duplication, been amalgamated with one on similar lines mailed from the O.A.C.,

The vegetable exhibits at the Canadian National Exhibition and Royal Winter Fair have never been excelled, and created the greatest interest in the thousands from the United States and elsewhere, who previously to this had no conception of the excellent vegetables that can be grown in this Province, in spite of the many handicaps of weather and competition. The following branches entered the competition at the Canadian National Exhibition for the generous prizes offered, and the prize winners were: Toronto, London, St. Catharines, Peterborough, Brantford, Kingston, Whitby and Toronto Township, in the order named. The splendid silver Challenge Trophy donated by the Central Association for the member obtaining the highest number of points in all vegetable sections at the Royal Winter Fair, was won in 1929 by John Brown, Humber Bay, who also won it in 1928. First prize and Challenge Trophy, offered by the American Growers' Association, for the best exhibit of celery, in competition with the finest types of this vegetable grown in the United States, was won by G. W. Bycroft, London, R.R. No. 7. This is a signal honour for our Association, and is not the first time that Canadian growers have come to the front in competition with American gardeners.

The Central Association has again sent a delegate to meet the Tariff Board at Ottawa, and it is hoped that their efforts will be effective.

New branches have been formed during 1929, and many of them are holding meetings frequently, and co-operative efforts have proved successful. Though the weather was not favourable during a good part of the year, low-lying land produced good crops, and prices were fairly satisfactory.

Mr. Geo. Rush, field man and organizer for the Ontario Vegetable Growers' Association, continues to do good work, and addressed a large number of meetings during the year, and wherever he went his advice and counsel were greatly appreciated by the intensive market gardeners in the province. Mr. Rush's services were also utilized in judging field crops, and garden competitions. He also acted as judge at Fall Fairs, and was chief speaker at short courses on vegetables and garden products conducted by the Department.

The several markets established in the outskirts of the City of Toronto for the sale of produce continue to meet with the approval of consumers in these districts.

ONTARIO PLOWMEN'S ASSOCIATION

There are few branches of the Department that have shown such steady growth as the Ontario Plowmen's Association, in the twenty years of its existence. The Department sends out expert judges to the Branch matches free of charge. One difficulty has been in the past, that the local branches do not start plowing early enough in the day, and the result is that before the contestants have finished their work the night is on and the educational value is lost owing to the fact that judges have to complete their work on the following day. This has been brought to the attention of the local directors and, doubtless, this weakness in the organizations will be promptly remedied in the incoming year. The report of the success of this Association has spread beyond the boundaries of Ontario, and British Columbia, Manitoba, Ssakatchewan and Alberta, are following in its wake and requests for the rules and regulations, constitution, score cards, etc., are promptly forwarded. Short courses for judges at plowing matches were held at Weldwood Farm, hear London, and at the Central Experimental Farm, Ottawa. These classes are invaluable in bringing about uniformity of judging, and in training the newer judges, as the staff has to be increased as the work progresses.

Each succeeding year the International Plowing Match and Farm Machinery Demonstration is marked by greater interest and larger entries. At London in 1928, there were 260 plowmen entered in the various competitions, and this was the record up to that time. In 1929, the demonstration was staged in the County of Frontenac on Governmental Farms adjoining the City of Kingston, where 360 plowmen took part in the different competitions. As usual the match covered a period of four days and tens of thousands of people were in attendance, notwithstanding the fact that the weather was somewhat unpropitious part of the time. Plowboys travelled hundreds of miles to compete for the magnificent trophies offered by the Association and their friends. There is not another organization in Canada that has as many friends among manufacturers, professional men and merchants as this one. No gate receipts are charged, the idea being to encourage good plowmanship and improve cultural methods. Young lads of from twelve to sixteen years competed in the junior classes and old men of seventy were seen driving straight furrows and speeding the plow, an implement that has stood the test of 1,000 years, and it is indeed interesting to watch its evolution from the crooked roots used by our earliest forefathers to the magnificent shining steel-girt machines of to-day. Many have been the inventions and patents taken out for this ancient implement of tillage. For instance, in Jaauary, 1853, at Cedar Falls, Iowa, a mould-board was patented, made entirely of glass. This invention was hailed as a blessing and a boon to the farmers of the world, but it was later found impracticable. Over three score years ago a young Glengarry boy heard of a Provincial Match that was being held at that early date, and in preparation to take part in the contest he made a wooden mould-board, covered it with tin and hiked to the Limestone City, 150 miles away and won the championship. Later this champion plowman was known to fame as D. M. McPherson, the Cheese King of Canada, who was also elected as a member to the Legislature.

The Indian boys are holding their own and there were over twenty competing at Kingston. In the boys' classes, in both sod and stubble, the first prizes were awarded to Geo. Garlow, Jr., of Ohswekin, and George also won the Massey-Harris Trophy for the best land in stubble which is the sweep-stakes prize. H. R. Hargreaves of Beachville, was the championship plowman in sod.

At the 1929 Demonstration all the different 20th century power machines were seen in operation, including tractors, threshing, seed cleaning, ditching, and in fact all the types of cultural and other machinery used on Ontario farms. The thanks of the farmers are due to the manufacturers of agricultural machinery who come to our Demonstration in increasing numbers each year at considerable expense to themselves to take part with us in the greatest farmers' gathering in any country in the world, and the wonder of it all is the fact that no mid-way or fakirs are allowed on the grounds. Wheels of fortune, coin tables, draw lotteries, and thimble riggers have no place in these gatherings. Some of our farm organizations claim that their institutions cannot be financed without these falsely called amusements, but in this organization there is no difficulty in this regard and there are not many fairs in Ontario that bring together such tremendous crowds which remain interested during the four days of the Demonstration, and, as before stated, interest continues to increase as the years go by. It has been stated, by those who do not know whereof they speak, that the Plowmen's Association is encouraging the use of single furrow plows. As nearly ninety per cent. of the farmers use this type and manufacturers continue to make them, we are at a loss to know what kind of a plowing match we could have if these largely used plows were debarred from the competition. They are not always the most economical plow to use, but, the good work done by them is still in evidence. Large prizes are offered for two and three-furrow plows, and if the farmer has the power available with either horses or tractors, these are certainly time-savers and this is a most important factor during the short and busy season on the farm.

The Multiple Hitch for as many as from three to six horses was again featured at the Demonstration, from 2 o'clock until 4 o'clock each afternoon. Farmers were very much interested and they were able to get first-hand information demonstrated in a practical manner by those in charge. This Multiple Hitch is being encouraged in Ontario.

With the assistance of the Horse Division of the Federal Department of Agriculture, the Ontario Horse Breeders' Association and the Ontario Plowmen's Association, who contributed $500 in prizes, a new departure was inaugurated this year, viz., "The Farm Teams' Competition." The competition was open to farm teams which had been utilized in the various classes by the plowmen and the prizes were paid to the owners. The Local Committee found no difficulty in supplying eighty teams which were furnished to the competitors from outside the County of Frontenac. The Local Committee, composed of forty men from Frontenac County, proved to be most energetic and enthusiastic from the start of the Demonstration to the finish and never before in the history of the Association was there a finer body of men to work with than those comprising this year's committee.

Some days prior to the Demonstration, two expert plowmen put on demonstrations in plowing at different places in the district so that the young men intending to compete would have the right idea of the kind of work they would be required to do in order to be successful in the classes in which they intended to take part. These demonstrations were a great help to the plowmen and were appreciated by all concerned.

An Inter-County Class was introduced this year into the prize list an proved a great success. Plowboys from fourteen counties (forty-two boys in all) competed for the splendid trophy offered by the "Ontario Farmer" and the substantial cash prizes put up by this Association. The Agricultural Representatives played their part in working up interest in this contest. The boys who entered were under twenty years of age and were fine farm lads, and a credit to the counties which they represented. The officers and directors will not soon forget the courtesy and kindness shown by the men of the County of Frontenac. As usual, the first day of the Demonstration was taken up with the local matches of Leeds and Frontenac Branches. The competitions were keenly contested and the work was of a high order. Substantial prizes were offered in these contests by the Counties of Frontenac and Leeds and in addition to this the different townships contributed.

LIVE STOCK BRANCH

Sheep Clubs

The policy of placing small flocks of ewes with young farmers on whose farms sheep are not being kept has been continued by this Branch during the past year. The flocks placed during the season of 1928 were supervised during the season of 1929 and demonstrations given on dipping, docking, castrating and general flock management. The following table summarizes briefly the success of the club members in the various counties. It will be noted that the average increase per flock of five ewes was approximately five and one-quarter lambs raised to marketable age, which is quite satisfactory, realizing that none of the 154 club members had previous experience in sheep raising. Sometimes failure is more beneficial than success in pointing out as a demonstration the necessity for proper care and management of the flock. As an illustration, eight boys out of the 154 had no lambs to their credit in 1929. In almost every case this was the result of not marking the ram at the breeding season time, although all club members were warned that the ram should be marked when turned with the flock. Such cases as these impressed upon other club members the absolute necessity of paying attention to all details if the greatest success is to be realized. Generally speaking the club members are well satisfied with their venture and all anticipate better success in 1930 than in 1929 as a result of their year's experience in handling the flocks.

County	Name of Club	Number of Members	Number of Lambs Raised to Marketable Age
Haldimand	Cayuga	10	62
"	Dunnville	15	83
Hastings	Stirling	16	84
Lanark	Ferguson Falls	12	67
"	Lanark	16	81
Renfrew	Douglas	12	73
"	Eganville	12	55
Simcoe	Carley	10	55
"	Oro	11	45
"	Phelpston	9	27
Wellington	Arthur and Maryboro	12	64
"	Minto	11	67
Grey	Markdale	8	46
		154	809

During the past season 254 new flocks were started by placing in all cases with the exception of Grey County and the District of Cochrane, five ewe lambs in each flock together with a pure-bred ram lamb instead of bred ewes as prevailed in 1928. The returns from such flocks to the Department were lessened to make the returns proportionate with the initial investment. In Grey County a number of yearling ewes were available and these were used for the extension of the club work. In the District of Cochrane, where thirty-five new flocks were placed, bred ewes were given to the club members. These ewes will be the foundation stock for the sheep industry in this section as practically no sheep were being kept in the District until these clubs were formed. The following table summarizes the clubs organized during the past year:

County	Name of Club	Number of Members
Carleton	Carleton	10
Cochrane	Glackmeyer	19
"	Moonbeam	16
Glengarry	Lochiel	10
Huron	Turnberry	14
Lambton	Forest	16
"	Oil Springs	17
"	Petrolia	14
Middlesex	Ailsa Craig	12
"	McGillivary	11
"	West Williams	11
Ontario	Scugog	11
Perth	Rannoch	13
Rainy River	Barwick	11
"	Devlin	9
"	Emo	13
"	Stratton	14
Welland	Wainfleet	11
Wellington	Belwood	12
Grey	Markdale 1929	10

Generally speaking, sheep breeders in Ontario have experienced a fairly successful season during 1929. In the case of the pure-bred section of the business long wool breeders have continued to find an excellent market for rams in the Western States where the Cotswold and Lincoln breeds are used extensively for crossing purposes on range ewes. The home market has absorbed to a large extent the available supply of Shropshire and Oxford rams while the Southdown breeders have exported practically all their available surplus to the Southern States. The remaining short wool breeds, while less popular in the Province, have experienced a good export trade for the best specimens of the breed. Prices for market lambs have continued to remain satisfactory and the returns from the sheep section of the farm business are proving probably as protfitable as any other line and at the same time useful service is being rendered in the control of weeds and the maintenance of soil fertility.

RAM CLUBS

Previous to 1928 some sheep extension work was carried on in specially selected districts by the formation of ram clubs, whereby pure-bred rams were placed in flocks already existent in the district on the condition that the owners of such flocks would follow approved practices in breeding, care and management, and marketing. During the past year the agreement existent between these clubs and this Branch expired in the case of the three remaining clubs, namely, the Rainy River Sheep Club in the Rainy River District, and the Little Current Sheep Club and the Manitowaning Sheep Club on Manitoulin Island. In each of these districts Lamb Fairs were organized and carried to a successful conclusion. A prize list of approximately $200 was offered at each of these fair through the co-operation of the Dominion Live Stock Branch and the Ontario Department of Agriculture.

At the annual Lamb Fair, held at Emo, August 14th, approximately 350 market lambs were exhibited and marketed after the fair. The lambs from this district have continued to top the Winnipeg market and were sold at $13.50 per hundredweight in Winnipeg. The great bulk of these lambs graded No. 1

and averaged in weight approximately ninety pounds. The rams which remained the property of this Branch during the demonstration were sold by auction among the sheep breeders of the district. As a result of this work several sheep men are investing in pure-breds in order to have available in the district a supply of pure-bred rams for use among the sheep raisers. Practically without exception every flock in the district is headed by a pure-bred ram and the uniformity in type of the breeding stock and the market lambs produced is very striking. The sheep population in the district has increased to the point where breeding stock for other sections is now available. It is hoped that in our sheep extension work in other sections of Northern Ontario we may be able to select ewe lambs from this district to place in other sections.

The agreement covering ram clubs at Manitowaning and Little Current expired during the season of 1929. Lamb Fairs were held as at Emo and club shipments made to the Toronto market. 391 lambs were marketed from Manitowaning and 384 lambs from Little Current. The following table gives a summary of these marketings:

MANITOWANING LAMB FAIR
September 28th, 1929

Classification	Number Sold	Price per Lb.	Weight	Value
No. 1	112	12.615c	8,340	
No. 2	154	11.621c	11,680	
No. 3	102	10.756c	7,880	
Ewes	18	5.706c	2,230	
Total				$3,433.60

LITTLE CURRENT LAMB FAIR
September 27th, 1929

Classification	Number Sold	Price per Lb.	Weight	Value
No. 1	126	11.9715c	10,090	1,210.65
No. 2	145	11.549c	11,075	1,279.10
No. 3	91	10.934c	7,960	761.05
Ewes	14	4.1854c	1,575	65.92
Rams	8	9.50c	580	55.10
Total				$3,371.82

The rams in these clubs were sold by auction at this time to the farmers of the district. This work, while much appreciated in the district and while successful in itself, will not have the expected influence on the sheep raising industry of the island as was hoped, largely because of the decreased interest in the sheep raising business through the ravages on sheep flocks by wolves. It is much to be regretted that a considerable number of farmers on Manitoulin Island have found it necessary to dispose of their sheep flocks rather than take a chance on losses which they might incur through the wolves which have become all too common on the island.

This Branch has also rendered financial assistance by contributing to the prize list of Boys' and Girls' Sheep Clubs in both Middlesex and Huron Counties.

The prize winning lambs from these clubs were taken to the Western Fair, London, and placed on exhibit and an inter-club competition held.

THE DOG TAX AND SHEEP PROTECTION ACT

The administration of this Act has come under the Live Stock Branch and during the year fifteen appeals have been entertained. It is interesting to note that these appeals come from many different counties, as the following counties are represented: Dufferin, Essex, Frontenac, Middlesex, Norfolk, Ontario, Renfrew, Russell, Simcoe and Wentworth.

It is interesting to note that some municipalities which have suffered heavy losses from sheep killed by dogs are endeavouring to keep a stricter check on the dogs in the municipality.

In the Township of Amaranth the Council has, according to press reports, decided to pay a bounty of $12 to anyone destroying a dog caught in the act of worrying sheep or to the party giving information leading to a conviction against the owner of such dogs.

The Dog Tax and Sheep Protection Act is serving a very useful purpose in causing municipalities to check up more closely on the dogs maintained as in very few cases is it a good dog that is getting into trouble but rather is it the useless cur sometimes without a home that is causing the greatest losses.

BACON HOG CLUBS

In 1922 a boar loaning policy was announced through this Branch whereby approved farmers' clubs owning the required number of sows were supplied with pure-bred boars of bacon type. During the past year market conditions have been such, considering the price of grains, that interest in hog raising has not been particularly keen. As a result a number of the weaker clubs have disbanded and only nine new clubs were organized. This, however, is not serious as there are still over 250 clubs in existence and with the limited services available the desired supervision cannot be given to a much larger number.

During the past year seventy-two boars were purchased at an average price of $46.43 per head. These boars were delivered freight or express free to the nearest railway station of the respective clubs.

It is rather interesting to note that of the fifty prize winning litters in the Ontario Bacon Litter Competition twelve of these were sired by club boars owned by the Ontario Live Stock Branch.

The following table summarizes the bacon hog clubs in operation at the end of the fiscal year, 1929:

County	Number of Clubs	County	Number of Clubs
Brant	7	Leeds	2
Bruce	13	Lennox and Addington	2
Carleton	5	Middlesex	13
Dufferin	2	Muskoka and Parry Sound	1
Elgin	5	Norfolk	1
Essex	3	Northumberland	14
Glengarry	4	Ontario	2
Grey	25	Oxford	9
Haldimand	4	Peel	3
Halton	8	Perth	15
Hastings	12	Peterborough	4
Huron	8	Prescott and Russell	2
Kent	3	Prince Edward	2
Lambton	6	Renfrew	3
Lanark	6	North Simcoe	10

County	Number of Clubs	County	Number of Clubs
South Simcoe	13	Wellington	14
Thunder Bay	4	Wentworth	7
Victoria	6	York	3
Waterloo	12	Total	253

Special bacon hog fairs which have been held in co-operation with the Dominion Department of Agriculture were orgainzed and carried out successfully at Dutton, in Elgin County, and Komoka, in Middlesex County.

Bacon Litter Competition

In co-operation with the Dominion Live Stock Branch a bacon litter competition was organized in the Province of Ontario. In this competition the Province was divided into five districts as shown in the following table:

District	County
No. 1	Frontenac, Glengarry, Grenville, Hastings, Lanark, Leeds and Renfrew.
No. 2	Durham, Northumberland, Ontario, Peterborough and Victoria.
No. 3	Dufferin, Grey, Haldimand, Halton, Lincoln, Peel, Simcoe, Wellington, Wentworth and York.
No. 4	Bruce, Huron, Perth and Waterloo.
No. 5	Brant, Elgin, Kent, Middlesex, Norfolk and Oxford.

The prizes, with rules governing same, were as follows:

Prizes: 1st, $25.00; 2nd, $24.00; 3rd, $23.00; 4th, $22.00; 5th, $21.00; 6th, $20.00; 7th, $20.00; 8th, $15,00; 9th, $15.00; 10th, $15.00. Fifty per cent. of prize money being paid by each Department.

Objects:—This competition had as its objective the establishment of a standard of excellence for grade brood sows kept by farmers. It is recognized that those sows which are prolific and rear large litters of select bacon hogs, that are good feeders making good gains at a low cost, are valuable and improvers of commercial hogs. This competition aims to give such sows prominence as breeders in their respective communities in the hope that their female progeny will be selected as foundation brood sows for the district.

This competition was open to all bona fide farmers in the Province of Ontario having litters farrowed between March 1st and May 15th, nineteen hundred and twenty-nine. Each pig in all litters entered was ear-tattoed or ear-tagged before weaning and official weighing and grading at time of marketing being done by the Hog Grading Staff of the Federal Live Stock Branch.

A total of 200 litters was entered with 118 completing with the scoring being computed on the following basis.

Weight.—Fifty points was allowed for a standard of 200 pounds per pig at 190 days. An additional point was added for each pound of pork over this average, and one point deducted for each pound below this average. For example: A litter averaging 210 pounds scores fifty points, plus ten points, or a total of sixty points for weight; a litter averaging 195 pounds scores fifty points, minus five, or a total of forty-five points for weight.

Size of Litter.—Two and one half points was allowed for each pig brought to marketing age.

Quality.—Two and one-half was allowed for each select bacon hog.

Uniformity.—Two and one-half was deducted for each pig outside the weight ranges of 180 to 230 pounds.

BACON LITTER COMPETITION

County	Number of Entries	Number Completing Competition	Prizes Won
DISTRICT NO. 1			
Frontenac	2	1	
Glengarry	2	2	1–10
Grenville	6	4	4–9
Hastings	4	2	3
Lanark	11	6	2–8
Leeds	1		
Renfrew	9	6	5–6–7
	35	21	
DISTRICT NO. 2			
Durham	6	5	4–5–9
Northumberland	13	7	1–10
Ontario	6	2	3–8
Peterborough	7	5	2–6–7
Victoria	4	2	
	36	21	
DISTRICT NO. 3			
Dufferin	1		
Grey	4	2	3
Haldimand	8	7	5–8
Halton	2	2	4
Lincoln	1	1	
Peel	4	4	6–10
Simcoe	4	2	
Wellington	4	2	
Wentworth	5	3	1–9
York	10	3	2–7
	43	26	
DISTRICT NO. 4			
Bruce	4	3	9
Huron	5	5	2–5
Perth	13	8	1–3–4–6–7
Waterloo	20	11	8–10
	42	27	
DISTRICT NO. 5			
Brant	4	4	1
Elgin	8	2	7
Kent	2	1	
Middlesex	21	12	2–3–4–5–6–8–9–10
Norfolk	3	1	
Oxford	6	3	
	44	23	
Total for Province	200	118	

District	Total Pigs	Average Weight per Hog	Average Number of Feeding Days	Average Pigs to Litter	Total Selects	Average Percentage Selects
District No. 1	103	212.8 lbs.	177.8 days	10.3	42	40.7%
District No. 2	118	215.2 lbs.	185.4 "	11.8	69	58.4%
District No. 3	117	212.9 lbs.	186 "	11.7	70	59.8%
District No. 4	116	219.3 lbs.	178 "	11.6	74	63.8%
District No. 5	106	216.5 lbs.	179.9 "	10.9	76	69.7%
Province	560	216.6 lbs.	181.4 days	11.2	331	59.1%

PARASITE CONTROL

In co-operation with the Provincial Zoologist an organization campaign was put on for the eradication of internal parasites among the pure-bred swine herds of the Province. Some fifty breeders of pure-bred swine entered their herds for supervision and with the help supplied by this Branch the Provincial Zoologist was enabled to undertake this work. The herds and premises were inspected and treatment administered where necessary and recommendations made for the proper control of swine parasites. In each case the breeder paid for all medicines used, thus lowering the cost to the Department. Where the advice and treatments recommended by the Provincial Zoologist were carried out some very satisfactory results were obtained and the service rendered was much appreciated. Special posters for educational work on the control of parasites in sheep and swine were also distributed during the past year. Public meetings and demonstrations were held for all live stock producers.

LIVE STOCK IMPROVEMENT

Progress may be reported in the general campaign for improved live stock in Ontario. Special emphasis has been centred upon the elimination of grade or scrub bulls and in this connection the closest co-operation has maintained between the Live Stock Branch and the Agricultural Representatives.

At the close of the fiscal year, 1929, we are able to report that the following counties have, by by-law of the county council, proclaimed themselves Better Bull Areas: Bruce, Perth, Oxford, Wellington and Peel. In order that this by-law may be passed by the county council it is necessary that at least eighty per cent. of the bulls maintained within the county are pure-bred. The work has been slow but the events accruing are such that public sentiment is behind the movement. During the year assistance has been given to County Live Stock Improvement Associations in their work of eliminating poor bulls by granting bonuses to farmers who have never kept a pure-bred bull before when their first purchase of a pure-bred bull was made. The following table shows a summary of the assistance given in this connection:

County	Number of Applications for Bonus	Amount of Bonus
Bruce	13	$339.10
Lambton	2	65.00
Lennox and Addington	4	60.60
Middlesex	7	158.00
Peel	9	202.00
Perth	5	111.00
Wellington	6	166.00
	46	$1,101.70

In Northern Ontario, by order-in-council, the Live Stock Branch has been authorized to assist settlers in securing approved pure-bred bulls for use in the up-building of the cattle. To this end a grant of thirty per cent. of the purchase price of the approved bull is paid to the purchaser, together with the freight charges where such are necessary. The following table shows the bulls which have been purchased under this policy:

TABLE SHOWING BULLS BY BREEDS

Breed	Number of Bulls Purchased	Total Purchase Price	Average Purchase Price
Shorthorns	45	$5,686 50	$126 37
Herefords	15	1,948 00	129 87
Holsteins	9	1,155 00	128 33
Ayrshires	11	1,285 00	116 82
Guernseys	3	365 00	121 67
Jerseys	1	75 00	75 00
	84	$10,514 50	$125 17

PLACING OF BULLS BY DISTRICTS

District	Breed	Number of Bulls
Algoma	Guernseys	2
	Herefords	4
	Holsteins	3
	Shorthorns	5
Cochrane	Ayrshires	6
	Shorthorns	1
Manitoulin	Herefords	4
	Jerseys	1
	Shorthorns	2
Muskoka	Herefords	1
	Shorthorns	7
Nipissing	Ayrshires	1
	Herefords	1
Parry Sound	Herefords	5
	Shorthorns	4
Rainy River	Ayrshires	1
	Guernseys	1
	Holsteins	2
	Shorthorns	8
Sudbury	Shorthorns	2
Thunder Bay	Holsteins	4
	Shorthorns	3
Timiskaming	Ayrshires	3
	Shorthorns	13

During the fiscal year ending October 31st, 1929, work was carried on in Eastern Ontario to acquaint the cattle breeders with the policy for the creation of a restricted area for the control and eradication of tuberculosis. Meetings were held for the discussion of this policy. Petitions were circulated to ascertain the feeling of the people in regard to this question. The following table shows the counties and the percentages of cattle owners in favour of the creation of a restricted area:

County	Percentage in Favour
Carleton (Townships of Gloucester and Osgoode)	86.
Prescott and Russell	93.03
Glengarry	80.
Dundas	70.6
Grenville	76.
Leeds	81.7

These petitions were sent through the proper channels to the Dominion Department of Agriculture, asking that the counties enumerated be included in a restricted area. Work has since been started in this connection and testers are at work in the Counties of Prescott and Glengarry. In so far as possible the Ontario Live Stock Branch is giving assistance to these districts in carrying this policy to a successful conclusion.

STALLION ENROLMENT

During the season of 1929 there were 1,259 stallions enrolled in the Province of Ontario, which is a decrease of twenty-three over the preceding year. The following certificates were granted—150 A 1,423 approved, Form 1; 563 passed, Form 1; and 123 defective, Form 2. Out of this number 141 were enrolled as premium stallions for the season of 1929. Cash premiums were paid to the owners of 117 stallions on account of their season of 1928. These premiums are paid under the Federal-Provincial policy which was instituted in 1928, whereby both departments share equally in the total premium allotted. The following table shows the amount of money paid out in this connection by this Branch. This amount was duplicated by the Dominion Live Stock Branch:

Number of In-Foal Mares	No. of Stallions Qualifying	Amount of Premium Granted by Ontario
15 to 20	3	$30 00
21 to 30	16	60 00
31 to 40	28	90 00
41 to 50	15	120 00
51 and over	55	150 00

SUMMARY FOR THE PROVINCE OF ONTARIO SHOWING BY COUNTIES THE NUMBER OF DIFFERENT BREEDS OF STALLIONS ENROLLED DURING 1929

County	Clydesdale	Percheron	Standard Bred	Belgian Draft	Thoroughbred	Hackney	French Canadian	Shire	Suffolk	French Coach	German Coach	Hunter	Ponies & Morgans	Total Horses Enrolled
Brant	4	6	3	1	1	....	....	....	....	....	....	....	....	15
Bruce	31	11	10	3	1	....	....	....	1	....	....	....	....	57
Carleton	18	12	3	6	1	1	1	....	....	....	....	....	....	42
Dufferin	17	5	1	....	....	....	....	....	....	....	1	....	....	24
Dundas	5	3	5	....	....	....	....	....	....	....	....	....	....	13
Durham	18	7	2	2	....	1	....	....	....	....	....	....	....	30
Elgin	4	14	3	....	....	....	....	....	....	....	....	....	....	21
Essex	4	17	3	....	2	....	....	....	....	....	....	....	....	26
Frontenac	3	6	3	....	....	....	2	....	....	....	....	....	....	14
Glengarry	7	1	3	2	....	2	1	....	....	....	....	....	....	16
Grenville	2	5	3	....	....	....	....	....	....	....	....	....	....	10
Grey	26	12	7	2	....	2	1	....	....	....	....	....	....	50
Haldimand	6	6	1	2	....	....	....	....	....	....	....	....	....	15
Halton	2	5	1	....	1	1	....	1	....	....	....	....	....	11
Hastings	6	15	6	4	....	....	1	....	....	....	....	....	....	32
Huron	23	24	13	2	....	1	....	....	1	....	....	....	....	64
Kent	11	17	3	6	1	....	....	....	....	....	....	....	....	38
Lambton	30	8	7	....	....	1	....	....	....	....	....	....	....	46
Lanark	9	7	3	4	....	....	....	1	....	....	....	....	....	24
Leeds	7	9	4	1	....	....	....	....	....	....	....	....	....	21
Lennox and Addington	2	4	3	....	....	....	....	1	....	....	....	....	....	10
Lincoln	2	2	1	2	....	1	....	....	....	....	....	....	....	8
Middlesex	26	39	16	4	2	....	....	....	....	....	1	1	....	89
Norfolk	5	5	....	1	....	....	....	....	1	....	....	....	....	12
Northumberland	9	9	1	....	3	....	....	....	1	....	....	....	....	23
Ontario	23	6	1	....	....	2	....	....	....	....	....	....	....	32
Oxford	5	14	4	....	....	1	....	....	....	....	....	....	....	24
Peel	16	11	....	1	2	1	....	....	....	....	....	....	....	31
Perth	22	15	8	2	....	1	....	....	....	....	1	....	....	49
Peterborough	13	7	4	3	....	2	1	....	....	....	....	....	....	30
Prescott	7	7	....	1	....	1	2	....	....	....	....	....	....	18
Prince Edward	1	9	1	1	....	....	....	....	....	....	....	....	....	12
Renfrew	18	12	3	2	....	....	....	....	....	....	....	....	....	35
Russell	7	9	1	4	....	2	....	....	....	1	....	....	....	24
Simcoe	23	13	8	4	2	1	....	1	....	....	....	....	....	52
Stormont	2	5	....	....	....	....	2	....	....	....	....	....	....	9
Victoria	17	9	1	....	....	....	....	....	....	....	....	....	....	27
Waterloo	13	9	5	3	....	....	1	....	....	....	....	....	....	31
Welland	2	1	1	2	1	....	....	....	....	....	....	....	....	7
Wellington	31	7	2	....	....	1	1	....	....	....	....	....	1	43
Wentworth	3	1	1	1	1	....	....	....	....	....	....	....	....	7
York	22	17	3	1	19	2	....	....	....	....	....	....	....	64
New Ontario	18	22	2	2	1	....	1	....	....	....	1	....	....	47
Outside Points	4	1	....	1	....	....	....	....	....	....	....	....	....	6
Total	524	424	150	70	38	24	14	4	4	1	4	1	1	1,259

ONTARIO PROVINCIAL WINTER FAIR

The Ontario Provincial Winter Fair was held December 10th to 13th, inclusive, 1928. The Fair was in every way a success from the point of exhibitors and attendance. The incorporation of a Light Horse Show in the evening programme has considerably increased the gate receipts. Increased seating accommodation is now necessary to accommodate the public:

ONTARIO PROVINCIAL WINTER FAIR, GUELPH

Summary of Entries and Gate Receipts, 1919 to 1928

	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928
Heavy Horses	282	256	286	225	191	254	146	225	240	274
Light Horses	60	44	50	51	35	32	43	194	252	336
Beef Cattle	270	312	367	387	317	305	280	257	312	226
Beef Carcasses	......	......	......	......	......	......	......	11	5	15
Dairy Cattle	134	74	101	99	87	38	88	40	26	44
Sheep	536	536	716	768	581	424	408	419	398	398
Sheep Carcasses	93	96	121	179	112	81	96	100	99	81
Wool	49	40	43	54	42	41	40	38	35	30
Swine	302	301	287	391	273	153	184	199	173	146
Swine Carcasses	48	34	33	34	34	45	48	63	42	39
Seeds	350	291	282	295	308	372	334	262	211	220
Fowls	5,066	3,918	4,154	3,817	1,570	794	1,297	1,423	1,437	1,194
Turkeys and Water Fowl	449	367	441	372	458	359	456	383	408	415
Pigeons and Pet Stock	1,072	587	715	763	378	247	227	261	308	282
Dressed Poultry	179	186	277	273	290	145	177	111	150	113
Gate Receipts	$4,380	$7,984	$6,202	$5,286	$2,826	$2,813	$2,081	$3,685	$4,944	$5,200

HORSE SHOWS

The following horse shows have received grants during the fiscal year November 1st, 1928, to October 31st, 1929:

Association	Grant	No. of Entries	Prize Money
Elora	$100 00	49	$218 00
Drayton	100 00	27	103 00
Ottawa Horse Parade	100 00	401	288 00
Linwood	100 00	39	127 00
St. Clements	100 00	40	126 00
Clinton	200 00	117	531 50
Toronto Open Air Horse Parade	300 00	432	......
Toronto Horse Show	200 00	736	2,685 00
Canadian Hunter, Saddle and Light Horse Imp. Society	4,206 33	...	......
	$5,406 33		

LIVE STOCK EXPOSITION WINNINGS AT CHICAGO, ILL., 1929

Ontario was represented in the Shorthorn classes at the 1929 International Show at Chicago by five Ontario exhibitors, namely, Bruce A. McKinnon of Hillsburgh; George D. Fletcher, Erin; F. H. Deacon, Unionville; T. A. Russell, Downsview; and Jonas Bingham & Son, Waterloo. The following summary shows the winnings of these exhibitors in the various classes:

SHORTHORNS (BEEF)

Class	Total Entries	Ontario Prizes	Owner
Bull calved before May 1, 1926	9	4th	Bruce A. McKinnon
Bull calved May 1, 1926 to April 30, 1927	9	1st	F. H. Deacon
Bull calved Jan. 1 to April 30, 1928	10	7th	Geo. D. Fletcher
Bull calved May 1 to Sept. 30, 1928	15	1st	T. A. Russell
Bull calved Oct. 1 to Dec. 31, 1928	26	2nd	F. H. Deacon
Bull calved Oct. 1 to Dec. 31, 1928	26	3rd	T. A. Russell
Bull calved after Jan. 1, 1929	17	1st	F. H. Deacon
Bull calved after Jan. 1, 1929	17	3rd	Duncan Campbell
Bull calved after Jan. 1, 1929	17	4th	T. A. Russell
Three bulls, owned by exhibitor	14	1st	F. H. Deacon
Three bulls, owned by exhibitor	14	4th	T. A. Russell
Two bulls, bred by exhibitor	12	3rd	T. A. Russell
Senior and Grand Chamipon bull	..	...	F. H. Deacon
Junior Champion bull	..	...	T. A. Russell
Cow calved before May 1, 1926	4	3rd	F. H. Deacon
Cow calved May 1, 1926, to April 30, 1927	12	1st	F. H. Deacon
Heifer, calved Jan. 1 to April 30, 1928	16	7th	T. A. Russell
Heifer, calved Jan. 1 to April 30, 1928	16	9th	F. H. Deacon
Heifer calved May 1 to Sept. 30, 1928	16	9th	T. A. Russell
Heifer calved Oct. 1 to Dec. 31, 1928	20	3rd	T. A. Russell
Heifer calved Oct. 1 to Dec. 31, 1928	20	4th	F. H. Deacon
Heifer calved Oct. 1 to Dec. 31, 1928	8th	8th	Geo. D. Fletcher
Heifer calved after Jan. 1, 1929	17	5th	Geo. D. Fletcher
Heifer calved after Jan. 1, 1929	17	6th	T. A. Russell
Cow calved before May 1, 1926, with calf at side, calved after Oct. 1, 1928	6	2nd	F. H. Deacon
Senior and Grand Champion Female	....	....	F. H. Deacon
Aged Herd	8	1st	F. H. Deacon
Yearling Herd	8	4th	T. A. Russell
Pair Calves	15	3rd	F. H. Deacon
Pair calves	15	5th	T. A. Russell
Shorthorn Society of Great Britain and Ireland Special	....	....	F. H. Deacon

SHORTHORNS (DAIRY

Class	Total Entries	Ontario Prizes	Owner
Bull calved Aug. 1, 1928 to March 31, 1929	9	3rd	J. Bingeman & Son
Cow in milk, calved Aug. 1, 1924 to July 31, 1926	10	3rd	J. Bingeman & Son

SHEEP

Through the assistance given by the Ontario Department of Agriculture to the Ontario Sheep Breeders' Association a provincial exhibit of sheep was sent to Chicago to compete at the 1929 Exhibition. The following tables give a summary of the excellent showing made by Ontario exhibitors in competition with the leading flocks from United States. Undoubtedly this policy of exhibiting sheep at Chicago on the part of Ontario breeders has done much to advertise Ontario flocks and has stimulated trade with American buyers:

BREEDING CLASSES

Breed	Ontario exhibitors	Total exhibitors	Total 1st prizes	Ontario competed for	Ontario Won						
					1st	2nd	3rd	4th	5th	Championship	Res. Championship
Shropshires...	2	17	10	7	0	1	0	1	0	0	0
Oxfords.......	2	11	9	9	5	0	2	4	3	1	1
Lincolns......	2	4	9	9	9	8	5	0	0	2	2
Cotswolds.....	1	4	9	9	3	5	2	6	3	0	1
Southdowns...	2	12	9	9	4	6	6	2	0	1	0
	9	48	46	43	21	20	15	13	6	4 out of 10	4 out of 10

FAT CLASSES

Breed	Total 1st prizes	Ontario competed for	Ontario exhibitors	Total exhibitors	Ontario Won						
					1st	2nd	3rd	4th	5th	Championship	Res. Championship
Oxfords.......	3	3	1	8	0	0	1	0	2	0	0
Lincolns......	3	3	2	4	2	3	2	1	0	1	1
Cotswolds....	3	3	1	4	1	1	2	0	0	0	1
Grades and crosses, long wool...	4	4	3	6	4	4	2	0	0	1	1
	13	13	7	22	7	8	7	1	2	2 out of 4	3 out of 4

DAIRY CATTLE WINNINGS

During the year ending October 31st, 1929, the Ontario Cattle Breeders' Association made an exhibit of Jersey cattle at the National Dairy Show, which was held in St. Louis, Mo., and also at the Pacific International Live Stock Exposition, which was held at Portland, Oregon. The following gives lists of the winnings:

DAIRY CATTLE WINNINGS AT THE NATIONAL DAIRY SHOW, 1929

2-year-old bulls:
  4th prize—J. W. Innes, Woodstock.

3-year-old cows:
  4th prize—W. D. Thomson, Brooklin.

2-year-old cows:
  5th prize—W. D. Thomson, Brooklin.

State Herd:
  4th prize—Ontario.

DAIRY CATTLE WINNINGS AT THE PACIFIC INTERNATIONAL LIVESTOCK EXPOSITION, INC., 1929

Bull calf, 4 months and under 1 year:
  6th prize—W. D. Thomson, Brooklin.
  8th prize—B. H. Bull & Son, Brampton.
Junior yearling bull, 1 year and under 18 months:
  5th prize—B. H. Bull & Son, Brampton.
Senior Yearling Bull, 18 months and under 2 years:
  7th prize—George D. Thomson, Woodstock.
Bull, 2 years and under 3:
  4th prize—W. Duffy, Newmarket.
Bull, 4 years or over:
  2nd prize—B. H. Bull & Son, Brampton.
Cow, 5 years or over:
  4th and 10th prizes—Mrs. D. K. Mason, Georgetown.
  5th prize—John Pringle, London.
Cow, 4 years and under 5:
  4th and 9th prizes—B. H. Bull & Son, Brampton.
Cow, 3 years and under 4:
  1st prize—W. D. Thomson, Brooklin.
Heifer, 2 years and under 3:
  7th prize—W. D. Thomson, Brooklin
Senior Yearling Heifer, 18 months and under 2 years:
  3rd prize—B. H. Bull & Son, Brampton.
  10th prize—Cyril Clark, Brampton.
Junior Yearling Heifers, not in milk, 1 year and under 18 months:
  2nd prize—George D. Thomson, Woodstock.
  4th prize—Senator A. C. Hardy, Brockville.
Heifer calf, 4 months and under 1 year:
  9th prize—Senator A. C. Hardy, Brockville.

ASSISTANCE TO AUCTION SALES OF PURE-BRED LIVE STOCK

During the year ending October 31st, 1929, assistance has been given to seventeen local associations that have held auction sales of pedigreed cattle. A total of 597 head passed through these sales and the total financial assistance given by this Department amounted to $1,880.00. This method of selling cattle among our dairy cattle men is giving way to another form of marketing, which is through a county fieldman, whose services are available to buyers at all times. There has been a decrease in the number of cattle being sold through club sales during the past few years. This is probably due to the trying conditions of the business. The following is a summary from the order-in-council under which assistance is given to these sales:

> "An allowance of $4 per head is made for tested cattle, providing all cattle at the sale have successfully passed the tuberculosis test and that an affidavit is taken by the contributors to the sale that their herds are free from contagious abortion and other infectious and contagious diseases. The maximum grant in such cases is $150. In sales where the cattle are not all tested for tuberculosis, but are free from abortion or other infectious diseases, the grant remains at $3 per head with a maximum of $100 for any one sale."

CO-OPERATIVE CAR SHIPMENTS OF LIVE STOCK

As a service to breeders of pure-bred stock in Ontario in enabling them to market their animals in Western Canada, the Live Stock Branch maintains a service known as our co-operative car shipments, whereby, when sufficient stock is sold to purchasers in Western Canada, this stock is assembled, shipped west, and distributed to the purchasers. This service is appreciated not only by our Ontario breeders but by western buyers.

NUMBER IN EACH SHIPMENT

Year	Horses	Cattle	Sheep	Swine	Total
1909	25	70	84	4	183
1910	39	51	36	7	133
1911	58	51	51	18	178
1912	51	45	24	20	140
1913	47	71	107	21	246
1914	49	97	34	20	200
1915	28	104	76	8	216
1916	59	185	100	22	366
1917	70	269	196	15	550
1918	67	250	180	4	501
1919	24	154	154	4	336
1920	18	110	37	6	171
1921	1	37	19	5	26
1922	3	18	6	21	48
1923	6	32	9	28	75
1924	1	22	2	..	25
1925	1	12	11	..	24
1926	2	43	33	5	83
1927	3	56	43	..	102
1928	4	46	81	7	138
1929	1	37	46	2	86

PURCHASE OF COWS FOR NORTHERN ONTARIO

The Live Stock Branch has continued during the past year the co-operation with the Department of Northern Development in the supplying of cows to Northern Ontario. Eighty-four grade dairy cows were purchased for re-sale to settlers at a total cost of $10,385.49. Shipments were made to Cochrane, Fauquier, Val Rita, Mattice, Matheson and Hearst. Since this policy was inaugurated between five and six hundred cows have been purchased on account of settlers' needs and the service rendered has been much appreciated in Northern Ontario.

LOCAL POULTRY ASSOCIATIONS

Local poultry associations again received assistance from the Department through the supplying of judges, lecturers and grants to associations during the fiscal year, November 1st, 1928 to October 31st, 1929:

Number of associations holding a show during the fiscal year	35
Number of poultry judges supplied	35
Number of lecturers	14
Total amount of grants paid to local associations, November 1st, 1928, to October 31st, 1929	$1,960 00
Total expenditures in connection with local poultry associations—judges, lecturers, grants, confederation, etc	3,534 49

INSTITUTES BRANCH

The 1,150 Branch Institutes in the Province with over 40,000 members, have carried on very effectively during the year. The educational work in the individual branches, the wholesome social leadership and influence provided and the community service rendered have maintained the high standards set in recent years.

The district organizations, with an average of about twelve branches each, as well as the convention groups, are becoming increasingly effective as a means to more uniform and worthwhile activities in the sections covered.

Groups of women are passing on to each other in their regular monthly meetings the accumulated knowledge of years of experience and are reading, digesting and interpreting to each other the splendid publications furnished them without charge, not only by the Department of Agriculture, but other branches of Government. Information of special value to those with homemaking responsibilities is found in the splendid periodicals and standard works made available through Travelling and Public Libraries, and is much appreciated by the Institute members who are continually seeking ways and means of increasing their efficiency in the housing, feeding and clothing of the family, with a view to proper development of the youth and maintaining the health of the adults. The increased call for literature bearing upon choice of foods, desirable combinations, their preparation and use; the thoroughness with which literature bearing upon health is reviewed and studied; the desire for information bearing upon the remodelling of houses and the building of new houses; and the introduction of labour saving devices and equipment, show a growing interest on the part of the rural women in those matters which means so much to the efficiency, comfort and health of the people.

Special interest is being taken in nutrition. A chart has been issued classifying food under energy giving foods and body building and regulating foods and also lists those which contain vitamins of such great value in health giving qualities. This chart is printed on cardboard and is usually displayed in the kitchen where it can be referred to at all time.

The Women's Institutes of the Province of Ontario are becoming more firmly established from year to year, exerting a wholesome social influence throughout the whole countryside and enabling the residents through co-operative effort to provide most valuable equipment for community undertakings and uniting their forces to make the best use of the available literature, talent and service.

The past year has been one of great importance so far as co-operative effort on the part of women of rural sections is concerned. The first Conference of Women's Rural Organizations with representatives from practically all countries in which such effort has been undertaken, was held in London, England, April 30th to May 3rd, 1929. The following countries were officially represented at this important gathering:

> Australia, Belgium, Canada, Czecho-Slovakia, Denmark, England, Estonia, Finland, France, Germany, India, Ireland, The Netherlands, New Zealand, Norway, Scotland, South Africa, Sweden, Switzerland, U.S.A.

It was evident from reports presented at this Conference that Canadians are carrying on most successfully as compared to other countries, in their rural volunteer organizations, and through co-operation with various departments of government service.

Ontario was the first to set an example in general co-operation between government service and local organizations, and this plan has been successfully adopted in whole or in part in a number of countries.

The interest on the part of rural women in the work of the Women's Institues is gradually increasing, new branches being formed from time to time in various sections of the Province. The splendid reports presented at the conventions held in the fall showed most valuable work of great variety being carried on and much optimism was expressed as to the future.

Following the above general statement, we beg to report somewhat in detail on the services rendered by the Institutes Branch, followed by a summarized report of the activities of the Institutes.

STANDING COMMITTEES

For the past two years, the activities of the Institutes have been classified under definite headings with the result that individuals and groups in each branch become responsible for definite features of the work.

The reports from the chairman of the various Standing Committees cover a wide field of interest and action on the part of the members, but space will enable us to present only the *outstanding activities* worthy of special mention as seen from the departmental viewpoint.

Under *Household Economics*, the requests for literature, applications for instructors, programmes prepared, and work reported indicate a keener and more intelligent selection, preparation and combination of foods, an appreciation of labour saving conveniences and equipment, a recognition of the value of fresh air, and the effect of beauty and colour in the home.

In their *educational* efforts, the Institutes are utilizing to better advantage the available literature, especially that bearing upon health and food. While we reach over 9,000 annually in the Demonstration Lecture Courses provided by the Women's Institute Branch, the great majority of the rural youths and grown-ups receive no systematic instruction along these lines. The recognized value of such instruction is creating a desire for an educational policy which will provide manual training for the boys and domestic science for the girls, of sufficient breadth to be of real worth, at convenient centres throughout the rural districts.

In *Agriculture*, there is a growing appreciation of quality in seed and foundation stock and the economic advantage of uniformity in production and grading for market. Much interest is shown by the women and girls in the destruction of weeds and the elimination of tuberculosis, and many are adding considerably to the farm income from the lighter lines of agriculture and handicrafts.

Under *Health*, increased attention is being given to health education and preventive measures. Public sanitation and the prevention of contagious diseases are receiving special attention. There is a growing desire for general medical and dental service at reasonable charges in the outlying sections of the Province.

There is an ever-increasing interest in the *laws of the land* and the administration of the same, especially those relating to women and children, keen interest being manifested in inheritance, wills and custody of children.

It is becoming a general practice for members of the Women's Institutes to *welcome newcomers* from overseas and give them an opportunity to become identified with the Institute and community life.

Beyond the general practice of *looking after the needy* of the community covered by the Branch, great quantities of supplies are sent each year by the

Institutes of old Ontario to the north, where the poor crops of a year ago had reunited in more than usual want among the settlers.

The Institutes are providing a wide variety of *community equipment* and are using their talents and influence to see that the best use is made of the same. The women of Ontario are becoming very efficient community housekeeprs, and those activities which concern the whole people are receiving judicious and liberal support.

In *Historical Research*, a splendid service is being rendered by collecting information and making permanent records of individuals, farms, industries, buildings, and customs, while some counties have started a museum in which to store articles of historic worth.

Under *Canadian Industries*, an intelligent study is being made of Canadian products, with a view to inducing members to purchase Canadian-grown or Canadian-made articles in preference to imported goods, when equal value can be prodcured.

DEMONSTRATION LECTURE COURSES

Nearly 9,500 girls and women took advantage of systematic instruction given in the short courses in Food Values and Cookery, Home Nursing and First Aid, Sewing and Millinery. The great majority of these courses consisted of two weeks' instruction while there were quite a number of one month courses and a few which lasted for three months.

In addition to these regular courses, instruction was given in Handicraft in a few centres to girls and young women who took keen interest in making artificial flowers, parchment shades, leather work, painting in wax, etc.

As a result of the instruction in food values and cookery, there is a marked increase in the use of vegetables and greens in the rural districts and a more general appreciation of the value of milk in the diet, especially for children.

Through the information received in the Home Nursing and First Aid classes; many of the girls and women who have taken the course are giving valuable aid in cases of emergency where a trained nurse cannot be obtained. In some of the outlying sections of the Province where doctors and nurses are so far away, this service is much appreciated, and in many cases all that is possible.

Many of the girls and women in the rural districts are now able to make their own dresses and other clothing as a result of the instruction received from the departmental staff.

Courses held from November 1st, 1928, to October 31st, 1929:

Regular Demonstration Lecture Courses:	No. Held	Persons taking Instruction	Total
Sewing	82	1,489	
Millinery	9	146	
Home Nursing and First Aid	61	1,681	
Food Values and Cookery	55	1,581	
			4,897
One-Month Courses	33		
Foods and Cookery	..	1,334	
Home Nursing and First Aid	..	1,132	
Sewing	..	1,228	
			3,694
Three-Month Courses	6		
Foods and Cookery	..	223	
Home Nursing and First Aid	..	209	
Sewing	..	198	
Millinery	..	190	820
No. of Courses	246		
Total who took instruction	..	....	9,411

SUMMER SERIES OF MEETINGS

For the past twenty-eight years it has been the custom to provide lecturers for a series of meetings held during May and June, a season of the year which meets the convenience of the great majority of members who look forward to the occasion as an opportunity to secure information of real worth along lines of general interest and to also discuss with the representative of the Department ways and means whereby the activities of the local branch may be made of greater value. Altogether there were 750 meetings held and in a number of districts two or three branches joined forces for the occasion, so that practically all members of the 1,150 branches had an opportunity to attend one of these meetings.

Among the subjects dealt with were the following:

HEALTH:

1. A Mother's First Duty to Herself.
2. In Training for Health, Beauty and Happiness.
3. Giving the Baby a Right Start in Life.
4. The Value of Temperature, Pulse and Respiration.
5. Old Age Retarded.
6. The Four Cardinal Virtues—Health and How to Obtain it.
7. The Physical Development of the Child.
8. Facts Revealed in Medical Inspection of Schools.
9. Emergencies in the Home.
10. Those Nerves of Ours.

GENERAL:

1. Canadian Industries and Why We Should Boost Them.
2. Home Handicrafts for Women and Girls.
3. Business Forms Every Woman Should Know.
4. Libraries, Music and Debates.
5. The Principles of Dress.
6. A Girl's Preparation for Life.
7. Women's National Outlook.
8. Books for Children.
9. Amusements and Games for the Rural Community.
10. Living a Life is More Than Making a Living.
11. The Influence of the Modern Magazine and Moving Pictures.
12. Mother and Daughter.
13. The Rural Girl of To-day and Her Opportunities.
14. The Art of Good Dressing.
15. Utilization of Colour and its Effects on the Individual.
16. Citizenship.
17. The 'Teen Age Boy and Girl.
18. Putting the Unity into Community.

INSTITUTE:

1. The Mother Institute.
2. How to Conduct a Meeting and Utilize the Talents of the Members.
3. The Work of the Standing Committees.
4. A Four-square Programme for Junior and Senior Institutes.
5. Helping Boys and Girls to Find the Right Life Work.
6. How to Make an Efficiency Study of Yourself and Your Institute.
7. The Social and Economic Side of Immigration from the Homemaker's Viewpoint.
8. A Mother to the Community.
9. The Institute as a Factor in the Life of the Community.
10. Relation of the Women's Institutes to the Public School.
11. Essentials in Institute Work.

FOOD:

1. A Few Food Facts.
2. Balanced Rations in Everyday Life.
3. Feeding the Family.
4. The More General Use of Milk and its Products in the Home.

AGRICULTURE:

1. Women and Agriculture.
2. Women in Agriculture for Pleasure and Profit.
3. Light Agriculture for Women.

DISTRICT ANNUAL MEETINGS

It is customary for the branches in each district to send representatives, according to the number of members, to a central meeting sometime during the month of June, when reports are presented of the activities of each branch. Officers are elected and ways and means considered for making the work during the year of greatest value, and the possibility of extending the organization to new centres and giving special assistance to the branches needing help are considered.

The member of the Provincial Board for the subdivision in which the district is located attends and reports upon the activities of the Provincial Federation and is thus enabled to carry back to the Provincial Board the recommendations of the district.

Special speakers are provided by the Department for a few of these district meetings.

ANNUAL CONVENTIONS

Conventions were held at the following places during the fall:

Place	Counties and Districts Represented	Date 1929	Attendance
New Liskeard	Temiskaming	Sept. 25, 26	150
Huntsville	Nipissing, Muskoka, Parry Sound	Oct. 2, 3	175
Port Arthur and Fort William	Kenora, Rainy River, Thunder Bay	Oct. 8, 9	150
Billings	Manitoulin Island	Oct. 15	200
Hilton Beach	Algoma and St. Joseph Island	Oct. 17, 18	125
Teeswater	Bruce, East and West Huron, North Perth, North Wellington	Oct. 22, 23	300
Kingston	Addington, Amherst Island, Brockville, Frontenac, South Leeds, Lennox	Oct. 24, 25	275
Ottawa	Dundas, Glengarry, Grenville, North Leeds and Grenville, Carlton, Lanark, Renfrew, Stormont	Nov. 4, 5, 6	225
London	Elgin, Essex, Huron South, Kent, Lambton, Middlesex, Oxford, South Perth, Waterloo	Nov. 5, 6, 7.	450
Hamilton	Brant, Haldimand, Lincoln, Norfolk, Welland, Wentworth	Nov. 12, 13, 14	425
Belleville	Hastings, Northumberland, Prince Edward	Nov. 14, 15	275
Toronto	Durham, Dufferin, Grey, Halton, Haliburton, Peel, Peterboro, Simcoe, Victoria, Ontario, Centre, East, South, West Wellington, York	Nov. 26, 27, 28	650
	Total Attendance		3,400

Each convention area with its convention committee, and (in old Ontario) chairmen of standing committees, has developed the leaders in the Institute to a greater degree than any other undertaking. Instead of one group carrying on a convention for the whole Province, we have an enthusiastic lot of leaders in each of the convention areas who have demonstrated their capabilities in planning for and carrying on the convention in a most business-like manner. At all centres where conventions were held the civic representatives and other local leaders have heartily welcomed the delegates and complimented the Institutes on the splendid service rendered.

JUNIOR INSTITUTES

There are throughout Ontario ninety Junior Institutes with a membership of over 2,000. These branches are organized on a similar basis to the Senior Institutes with whom they co-operate in carrying out their programmes of self-development and promoting interests which will make for better homes and better country life in general in rural Ontario. The juniors feature programmes of special interests to girls and carry on joint programmes and county projects with the junior farmers. They aim at a 4-H development, the training of the Head, the Hand, the Heart and the Health.

The educational or head training is provided for in planning programmes, preparing papers and addresses, the special studies undertaken in home economic topics, judging compeitition work, laws of the country and all the various subjects which our enterprising rural girls are interested in. Of course, they get some of their best head training through their debates, judging competitions, public speaking contests and musical festivals.

The hand training is furnished through courses in cookery, home nursing, sewing, millinery, demonstrations, garment making clubs, fair exhibits, garden and canning clubs, poultry clubs, home beautification contests and the many activities and projects carried on by the girls in their homes and throughout their communities.

The health training comes through their nursing courses, leading them to adhere to health rules, observe laws of sanitation, practise right living, proper recreation and wholesome sport.

The heart training includes not only the services and kindnesses rendered to those in need of assistance and cheering, the little courtesies practised, but as well the standards of conduct set up through their social organizations—properly chaperoned parties, definite closing hours, proper deportment in dancing and in all their recreation and social activities.

JUDGING COMPETITIONS

Forty-one counties and districts took advantage of the coaching classes provided through the Institutes Branch during the past year. The County Agricultural Representatives, co-operating with the local Institute branches, arrange the coach's itinerary and create an interest in the classes, so that a goodly number will attend them. The instructor coaches in five or six centres in a county usually remaining in each place for two days. She gives valuable and practical lectures on Nutrition, House Furnishing and Clothing. This information is then applied to planning and judging family menus, school lunches, farm living-rooms, kitchen plans, church costumes, parade and country girl's wardrobes.

At the conclusion of the classes a county judging competition is held. The girls from the various centres coached meet at a place selected and judge the classes in which they have been coached. They are given fifteen minutes to judge and place correctly the group of four lunches, menus, living-rooms, kitchens wardrobes and parade models and two minutes to give reasons to a judge for their placings. Fifty marks is allowed for placing and fifty marks for correct reasons.

Thirty-eight county juding competitions were held with an aggregate attendance of 1,000. Bruce, Peel, York, and Perth held the largest competitions. Four inter-county judging competitions were held during the year:

Toronto	213 girls—29 teams
Ottawa	65 girls— 7 teams
Peterboro	42 girls
London	43 girls

The Annual Provincial Competition at Toronto brought girls together from thirty-one counties—twenty-nine county teams taking part in the inter-county competition, and 126 contestants in the open class.

York County team won first place and Ontario County, second. The members of the York team were:

Mary Barker, Temperanceville	526
Jean McKinnon, Woodbridge	509
Greta Radcliffe, Stouffville	518
	1,553

The contestant standing highest in the various classes in the team competition were:

Nutrition:	Ada Proctor, Wingham	190
Clothing:	Clara Sturm, Welland	192
House Furnishing:	Anna McMurray, R.R. No. 4, Lakefield	181
The girl receiving the highest aggregate:		
	Margaret Doble, Sunderland	537

In the open competition the following girls received highest honours:

In the open competition the following girls received highest honours:

Nutrition:	Bessie Hunter, Brooklin	187
Clothing:	Mrs. D. S. Dunton, R.R. No. 2, Brampton	189
	Elsie Elliott, R.R. No. 1, Malton	189
House Furnishing:	Marjorie Harbottle, R.R. No. 3, Campbellville	182

Seven counties competed at the Canada Central Exhibition at Ottawa, Lanark team heading the list.

The Lanark team was composed of:

Laura Donaldson, Lanark	489
Flora Sadler, Pakenham	536
Ivy Flintoff, R.R. No. 6, Perth	497
	1,522
The high girl at Ottawa was:	
Flora Sadler, Pakenham	536

The high girls in the open competition were:

Nutrition:	Alma Anderson, Fallbrook	192
Clothing:	Mary Jackson, Sunbury	180
House Furnishing:	Winnifred Hayden, Pakenham	182

There were forty-two contestants in the open competition held at Peterboro. The girls receiving the highest number of points in the various classes were:

Nutrition:	Mae B. Petrie, R.R. No. 8, Peterboro	187
Clothing:	Ruth McKessock, Hampton	180
House Furnishing:	Della Diamond, Norham	177
	Anna B. McMurray, Lakefield	177

Another competition was held at the Western Fair in London with forty-three girls competing:

Nutrition:	Mrs. Roy Gordon, Ingersoll	196
Clothing:	Freda Binks, West Lorne	176
House Furnishing:	Maudella Richardson, R.R. No. 1, St. Pauls	183

Judging competitions with their coaching classes have real educational value. The girls enjoy meeting other girls in their county and it also aids in fostering a county consciousness. When one makes the team and attends the Provincial Competition, she meets girls from all parts of the Province.

GARMENT MAKING CLUBS

The Garment Making Club is an organization through which girls may learn the elementary steps in sewing. The Department sends to any branch wishing to organize a club, the Girls' Garment Making Club Manual, which states definitely the rules regarding the organization of the club, and also gives the prescribed course.

The local branch Institute interests a group of girls from ten to sixteen years of age, or twenty years for second year work, in this project and secures a local woman, familiar with sewing, to act as leader and teacher. The group meets for a couple of hours each week or every two weeks and with a happy combination of work and play they learn much of real value.

Meetings are conducted in a businesslike manner, club songs are sung, accurate accounts kept of all material used and hours of labour, also a story is written by each member of her club experience. When the prescribed course has been completed, a representative from the Department judges the girls' work and certificates of achievement are awarded to those who successfully complete the year's work.

A number of branches organized clubs this year while other groups completed their second year's work. Branches and leaders who have sponsored this project are most enthusiastic over the splendid work which the girls accomplish. The little members are delighted with the product of their labours, one little girl writing that at first it was hard to hold the needle properly and to tie a knot, but now sewing is as easy as singing. Another little girl of eleven made two school dresses and thinks she can do all of her sewing now with a little help.

The delight expressed by many of those who have undertaken leadership in this splendid effort leads us to urge the older girls and women to form groups for club work.

GIRLS' CONFERENCES

Some 300 girls attended the three-day conferences at Macdonald Institute, Guelph, and the Kemptville Agricultural School, Kemptville, The various College departments co-operated in every way to give the girls invaluable information on subjects of special interest to rural girls. Addresses and demonstrations were also given on Home Economics subjects and various phases of girls' work.

Some of the subjects considered were: Projects for Junior Institute Girls; The Farm Home and Farm Girl; Further Education for the Girl Who Stays at Home; Community Activities, Debates and Plays, Nutrition Applied, Good Dressing, Interior Decoration, Needlecraft, Home Planting and Poultry.

In December, three one-day conferences were held at Guelph, Cobourg and London. Junior Institute work and Junior Girl's work in Senior Institutes were specially considered at these conferences and ways and means of making their work more effective. Reports were submitted on programme planning and county projects featured, such as Judging Competitions, Debates, Public Speaking Contests, Musical Festivals, Home Beautification Projects, Poultry Clubs, Garden and Canning Clubs and Fair Exhibits.

FRUIT BRANCH

The fruit grower with other classes of farmers is at the mercy of the weather. In the spring, late frosts take toll of the blossoms, wet cold weather hinders pollination; in the summer, drought will cut down the crop of small fruits and reduce the size of the tree fruits, while prolonged periods of rain will hinder spraying and encourage attacks of insects and fungous diseases, and then in the apple picking season, early frosts often result in heavy losses of the best winter varieties.

The past season started out well as, with the exception of certain varieties of pears, fairly satisfactory weather conditions existed throughout the blooming period. The attention of the fruit growers was directed at the annual convention to the necessity of providing bees for pollination purposes. Excellent results are being secured in many of the best fruit sections on the continent by having in the orchard or at some nearby point, at least one colony of bees per acre. Where the bees have to fly considerable distances, the chances of proper fertilization of the blossoms are rendered slight if either wet or cool windy weather exists during the blooming period. If satisfactory arrangements cannot be made with beekeepers in the vicinity, then the fruit grower will, of necessity, have to keep the required number of colonies himself.

Drought proved the worst enemy of the fruit grower in 1929. Setting in early, dry weather continued throughout the berry season, nearly wrecking the strawberry crop, and reducing seriously the yield of raspberries. The grape crop, estimated in July as 83,000,000 pounds was finally reduced to 56,000,000 pounds. Apple and other tree fruits were seriously affected as to size, but the continued bright days gave fruit a high quality, with little trouble from fungous disease. Aphids threatened to again become serious as in 1927. Some of the younger orchards that were showing excessive wood growth suffered severely, but on the whole, the damage was much less than in former years. Spraying as a prevention for the attacks of the different species of this insect will have to be more carefully considered.

Orchard culture in all lines received more attention from the growers than for some time. Good prices in 1928 undoubtedly stimulated increased interest in pruning, spraying and fertilizing. Winter meetings at all points were well attended and requests for assistance particularly in spraying, were far greater in number than in any previous year.

OVERSEAS MARKETING

Started in 1926, this work has increased steadily in importance to the fruit growers and shippers, and the decision was reached this year that a permanent representative should be appointed to act under the Fruit Growers' Association, handling apples, plums, pears, etc. This arrangement has proven quite satisfactory and will be continued the coming season with some changes, including assistance in the field for supervision of packing and shipping.

The quantity of fruit sold (mostly apples) in Great Britain and Scandinavia increased over one hundred and twenty per cent., and our growers are gradually regaining confidence in the export markets through the knowledge they have gained from having our own representative on the ground there to see that the shippers get fair treatment and the utmost return from their shipments. Mistakes in methods of packing and shipping have been detected and the information immediately sent back to the shippers by letter or cable, with the hope that any bad practices which may result from lack of knowledge, may be eliminated and the reputation of the Ontario pack, already good, may be improved.

Losses were incurred in the past as the result particularly of scald on varieties such as Greening, Stark, Wagener and Baldwin, and extensive experiments are planned for the coming season in the use of the shredded oil paper for the prevention of this trouble.

It is also planned to take over one or more packing houses in the export section of Lake Ontario to demonstrate the value of central packing, including machine grading for the barrel pack, proper storing and selling.

SPRAY SERVICE

This special service to the fruit grower started in Durham County five years ago by the Provincial Entomologist, has now extended to all parts of the Province where commercial orcharding is practised. The tender fruits section was added this past season, with a special service directed from the Horticultural Experiment Station at Vineland, and with three field men covering the seven townships. In addition, Elgin County was included for the apple growers. The total number of growers taking advantage of this scheme was 1,477, and the following counties were covered: Dundas, Prince Edward, Northumberland, Durham, Peel, Halton, Wentworth, Lincoln, Brant, Norfolk, Elgin, Oxford, Middlesex, Lambton, Huron and Grey. Special assistance was also given some of the larger growers in Ontario, York, Essex, Kent and Simcoe Counties. Nineteen field men were engaged in the work, which was under the joint supervision of the Professor of Botany of the O.A.C. and the Provincial Entomologist. The usual spray calendar was issued in conjunction with the Federal officers, and was widely distributed as general guide to the growers.

The cost of this service to the Province the past season was about $13,000.00, one of the larger items in the budget of the Fruit Branch. Why do the fruit growers require a spray service? This has been answered by the Provincial Botanist as follows:

> "There are certain regulations of spraying which are absolutely essential to success, and while you may put into the grower's hand a spray calendar, he may not be able to interpret that spray calendar and carry out the instructions without some further help. The importance of timing, for instance. It is one of the most difficult things for the average man to time his sprays so as to secure the maximum of results from them. He is a busy man, he has many pressing duties at that time of the year, and he has not time to go out in his orchard and follow carefully the development of his buds; he has not time to give the weather conditions the study that it requires in order that he should get his sprays on when they are going to give him the maximum returns. I think the most important factor in spraying, beyond all doubt, is that one of timing our sprays accurately. Let me illustrate that, in the case of the apple scab. If the apple scab gets on the little buds of our blossoms just when they are emerging and gets inside and under the skin there, we are going to have scabby fruit in spite of subsequent sprays. If we do not get in the sprays at the proper time we give that apple scab a fair chance to get under the skin and in spite of other sprays we are going to have scabby fruit and if we are, as I said before, going to secure the maximum results from our spraying we have got to get them on nearly the accurate time as possible.

"The second point is that of thoroughness. From my observations there are only ten or fifteen per cent. of the men who have been spraying who have been doing thorough work. That might not apply to the Niagara Peninsula but it does apply to the great majority of the other counties. I think the majority of growers in the past have not appreciated and have not just been doing thorough work. It is one of the hardest things to get men to appreciate and realize what thoroughness is. You cannot do it from a platform; you can tell a man all about thoroughness, but the only way to get him to realize what it is, is to go into his orchard and show him. That is the only way and this summer it fell to my lot to go into a number of orchards and we watched the men doing their work, men who thought they were doing thorough work. In some cases those who were there were able to point out to them how they were spraying this side of the tree and missing that side, and it was only by getting after the man right there in the orchard while he was doing the work, that we could demonstrate he was not doing as thorough work as he should. That is one of the most important points in regard to spraying, that point of thoroughness; and our supervisors get an opportunity to check the men up from time to time and to point out to them where they are falling down.

"Then, also, our supervisors have a chance to give them advice with regard to the spray materials, the fungicides and poisons they use. In some cases they find they have been making mistakes in the proportions they are using. I might also say that I believe it is the intention of the Department in the near future to extend this service so our supervisors will be able to give advice in regard to pruning, fertilization and cultivating of the orchard and possibly in time with regard to varieties. Those are the reasons why our growers need this spray service."

REPORT OF THE PROVINCIAL ENTOMOLOGIST

The following is a brief account of the main problems or work of the Provincial Entomologist during the year 1929.

Administration of the Fruit Pest Act

Under this is included, first the inspection of nurseries, and second the inspection of orchards for San Jose Scale and for Peach Yellows, Little Peach and Black Knot.

Inspection of Nurseries.—The nurseries of the Province were duly inspected for San Jose Scale. The total number of trees and shrubs of all kinds examined was 2,904,550 of which 1,775 were found infested and were broken down and destroyed.

Inspection of Orchards.—Very little time was required this year for inspection of orchards for San Jose Scale as this insect has been very scarce the last two years, though it increased considerably in numbers during the latter part of the summer and under favourable circumstances may again become at least temporarily a serious pest. In the early part of the season the inspectors devoted most of their attention to trying to eliminate the black knot of plums and cherries as this disease, owing to specially favourable weather conditions the last few years, had begun to be serious, especially in the Niagara district. The inspection for Peach Yellows and Little Peach was made throughout the Niagara district.

The total number of trees marked and later destroyed was 2,042 which is practically the same as the number in 1927, but an increase of 451 over that of 1928.

Spray Service

The spray service of the Province, which is under the joint general supervision of the Provincial Entomologist and the Professor of Botany, was conducted in much the same manner as usual. The service is growing in popularity and more men applied for membership in 1929 than at any previous time. The total number of orchards in the service now is around 1,300. The results this year were again very encouraging, a high average of clean fruit having been obtained in the great majority of orchards. In one county it is estimated that over ninety per cent. of all the fruit in the orchards in the service was free from scab and worms. The service is not only helping the growers to get better fruit but is also assisting towards the improvement of orchards in the Province in every other way. The main drawback at the present time to this work is the lack of a good system of marketing the fruit in many counties.

In order to keep up and improve the standard of the work being done by the local spray supervisors, a two-day short course was held in April at Simcoe in Norfolk County and was attended by not only all the supervisors but also by their co-operators, the Agricultural Representatives of all the fruit districts in the Province. The addresses were given by members of the fruit branch of the Vineland Experiment Station and by the Departments of Horticulture, Botany and Entomology of the O.A.C. It included not only spraying for the control of orchard pests but also all the other main aspects of fruit-growing.

Spray Experiments

These were conducted in co-operation with the Department of Botany. The work was done in the Ontario Reformatory Orchard. The following table gives briefly the materials used and the degree of control of scab obtained on the fruit of the different varieties. The percentage of worms is not shown because there were practically no worms in any of the blocks.

TABLE SHOWING THE RESULTS OF SPRAY EXPERIMENTS

Variety	Dust	Bordeaux first spray , Lime-sulph. and Arsenate of lead for rest	Aluminium sulphate, Lime-sulph. Calcium Arsenate	Canada Paint Dry Lime-sulph. Arsenate of lead	National Fertilizer Dry Lime-Sulphur Arsenate of lead	Check
		% Scab	% Scab	% Scab	% Scab	% Scab
McIntosh...	.8	.3	.0	1.0	1.5	100.0
Snow.......	6.7	1.9	4.3	3.4	4.3	100.0
Scarlet Pippin......	2.8	1.6	1.9	1.5	1.1	No check
Alexander...	3.9	3.6	7.0	7.0	7.8	100.0
Wolfe River.	.5	.0	5.7	.4	.3	No check
Baxter......	6.3	2.0	15.8	24.3	40.3	100.0

From the above it will be seen that the formula recommended in the spray calendar, namely, Bordeaux 3-6-40 for the first spray and lime sulphur and arsenate of lead for the rest, gave the best results; dust this year was next best.

The addition of aluminium sulphate to lime sulphur and calcium arsenate gave good results on everything except Baxters, as did also the two makes of dry lime sulphur. None of the materials caused any appreciable burning this year; hence the value of aluminium sulphate to lime sulphur was not shown in this case. This substance left the trees whiter than even Bordeaux mixture usually does. The season was not a good one for a severe test of the merits of the fungicide.

Oriental Peach Moth

Research work was again carried on the Oriental Peach Moth in co-operation with the Dominion Branch. Most of this research had as its object the determination of the influences of weather conditions upon certain stages of the insect. Fair progress has been made in this difficult problem but another season's work will be necessary to complete the study as planned.

Insect Outbreaks

There were two severe insect outbreaks during the season, namely, that of the Apple Aphis which attacked apple orchards and that of the Tarnished Plant Bug which attacked celery, dahlias, asters, gladioli and several other plants. A minor outbreak in a large greenhouse occurred during the winter and was caused by the larvae of certain fungus gnats and midges.

The Apple Aphis was especially severe east of Toronto though many orchards in western Ontario were also heavily infested. This is the second great outbreak of the apple aphids during recent years, the first being in 1927. Helped by the experience of 1927 the writer advised all those whose orchards were heavily infested to spray or dust thoroughly with nicotine sulphate. This, combined with the very dry weather which followed saved the crop from serious loss.

The Tarnished Plant Bug was more abundant and destructive than at any time in the experience of the writer. By the middle of July it had begun to attack celery in large numbers and by the end of the season it completely destroyed several fine fields of early celery and injured severely many others. As soon as the insect was known to be a menace, the writer and Mr. R. W. Thompson devoted as much time as they could spare to trying by experiments to find the best method of control. Up to the present no substance has been discovered which will kill a sufficient number of insects to control a serious outbreak, though heavy spraying or dusting with strong nicotine helps under some conditions. It is our intention to spend a good deal of time this coming season on the study of control measures for this very troublesome pest.

Larvae of Fungus Gnats and Midges.—These little white maggots attacked the roots of ranunculus, sweet peas, statice, iris and several other plants and threatened to do a great deal of damage. Several substances were tested as controls, of which corrosive sublimate, 1-1,000, was the most satisfactory under the circumstances. Considerable data of value to florists was obtained.

A New Pest of Orchards

In August a new insect known as the Apple and Thorn Skeletonizer was found by the writer. This insect feeds upon the upper and lower surfaces of the leaves eating away the green tissues and leaving only the skeleton or veins. It attacks both apples and haws. Though only found this fall it must have been present for some time because it is now widely spread over the Province. In the United States the insect caused considerable damage for the first few years after its introduction from Europe but as yet has been kept under good control by parasites or other natural factors, so we hope the same will be true here in the near future. If spraying becomes necessary there is little doubt that with slight changes our present spray calendar will be sufficient to deal with this insect, so that growers need not be alarmed.

HORTICULTURAL EXPERIMENT STATION

In addition to the usual activities of the station, the reinauguration of an Extension Service was made possible by the appointment of a man for that work. During 1929 the chief projects of the extension branch were the Spray Service Work, and a complete grape acreage survey of the Township of Louth. Reference to these activities is made later under Extension.

The work of the station falls naturally into three main groups, Experimentation and Research, Plant Breeding, and Extension. Some of the activities falling in these groups are discussed in the accompanying paragraphs.

Experimentation and Research

Nursery and Propagation Studies.—Five varieties, Red Spy, Starking, R. I. Greening, McIntosh and Melba on a series of Malling Types giving a range of vigour were set out in the fall of 1929 along with regular nursery trees for comparison. Trunk diameter and fruit yield records will be kept on this orchard to try to determine the value of these vegetatively propagated English stocks for Ontario conditions.

Experiments on budding nursery stock as time, method, treatment of stock and buds, etc., are under way. Nurserymen experience much difficulty in getting a stand of sweet cherries on Mahaleb stock, the one now in common use. Attempts are being made to determine the reason for this condition. Budding Windsor on Mahaleb in the summer of 1928, about every ten days from July 7th to September 18th, gave satisfactory and almost equally good stands except at the extreme early and extreme late dates. It is surprising to find such good results over such a long period of time. Fall counts on stock budded this year indicate that the rubber strip, a new tie for buds, is satisfactory and that the "take" of buds is equally as good as where raffia is used as a tie.

Sweet Cherry Transplanting.—Two years' results indicate the advantage of fall planting over spring planting and of spring digging and planting over fall digging, storing and spring planting. Pruning before the first season's growth has given better growth results than no pruning.

Grape Yield and Maturity Studies.—In the spring of 1929, a grape block of 1,250 vines, five years old, was selected on the farm of W. G. Haines at Jordan. In this block we have laid out an extensive fertilizer experiment with grapes. The object of an experiment on such a large scale was twofold. first, to determine the effect of fertilizers as affecting the acid-sugar ratio of the juice; and secondly, to determine the effect of continued applications of fertilizers on the vigour and future productivity of the plant. Coupled with this experiment we also included three types of pruning, consisting of light, medium and heavy pruning, as represented by forty-two, thirty-six and thirty buds per vine respectively. As this was the first season of the experiment no effect was found, nor was it expected, from the use of fertilizers. A marked difference, however, was found between the heavy pruning and the medium and light. Fruit yields on heavy pruning were one-half ton lower than either the medium or light. No significant difference was obtained between the medium and light types of pruning. The inference to be drawn from this being that the moderate type of pruning was sufficient for a maximum crop. This result bears out our results of a number of years ago on the number of buds to leave per vine. The fertilizers used and the rates per acre were as follows: Nitrate of soda 200 pounds; acid phosphate, 600 pounds; and sulphate of potash, 150 pounds.

Apple Orchard Sod Mulch Studies.—In the 1927 report there were given the results for the sod mulch orchard up until that time, when the first cycle of its programme was completed. The changes made at that time were that certain of the clean cultivation plots were seeded down permanently. From two year's results which we now have since that time, it is evident that these changes have not materially affected the relative positions of the various plots, in spite of the 1929 season having been such a dry one, and when one might expect adverse results from the sod mulch. The plots which were clean cultivated until 1927, then sod, have continued to grow at a good rate equal to that of those in sod since the orchard was planted. In other words sod has not interfered to any extent with vegetative growth.

Orchard Cultivation Studies.—It is of course recognized that even though the sod mulch system of orchard management may meet many requirements there will be certain soils and conditions where it may not prove satisfactory. For this reason in 1928 another orchard cultural experiment was started, in which orchard cultivation is reduced to the least possible amount and compared with the usual clean cultivation until about mid July, followed by cover crops.

It has been felt for some time that the present system of orchard management while having been in the most part satisfactory to date does not meet the requirements of a permanent orchard management system. The additions of various fertilizers will add the necessary mineral elements to the soil, but if there is not sufficient humus with its moisture retaining ability and its accompanying source of bacterial life which act on these raw mineral foods and reduce them to a form available for plant use, the addition of these fertilizers will be largely of no value.

Therefore, with a view to the future, these two orchard experiments are under way, bearing in mind always the other economic points as regards efficiency of the various methods measured by tree growth yields, quality of fruit, freedom from pest injury, etc.

Briefly the outline of this project (A Study of the Extent to which Apple Orchard Cultivation may economically be Reduced) is as follows:

PLOT I.—Contains 15 Baldwin, 10 McIntosh, 52 Wealthy and 4 Duchess trees, is to be ploughed up as early as possible in the spring, worked until a satisfactory seed bed can be prepared and seeded down to a cover crop.

PLOT II.—Contains the same number of trees as Plot I, is to be ploughed at least two weeks later than Plot I (allowing some spring growth of cover crop) and seeded as soon as soil is in shape.

PLOT III.—Contains 12 Baldwin, 8 McIntosh, 40 Wealthy, 3 Duchess trees, is ploughed early as in Plot I but kept cultivated until into July and then seeded.

PLOT IV.—Same number of trees as Plot III. Ploughed as Plot II and seeded late.

The above treatments are duplicated in further plots of comparable size and varieties.

The trees for this orchard were planted in 1921 as one year whips. The whole orchard had uniform treatment until 1928, consisting of the usually practiced clean cultivation until mid-July and then a cover crop.

The experiment proper has been under way two seasons only, and therefore no conclusions from the data secured are advisable. However, close observation shows no significant difference to date except that during the very wet midsummer conditions of 1928 the trees in the early seeded plots did seem to have a better appearance. In 1929, a very dry season, no adverse results from reduced cultivation were apparent.

Experimental Work with Vegetables.—The indoor tomato crop was extended to include sixteen different varieties and two excellent crops were grown. The Grand Rapids x Earliana hybrid, a Station selection gave the best yield, considering type of fruit produced. Six varieties recently introduced from England, as follows: Gaby Special, Potentate, Riverside Favorite, Filbasket, Ailsa Craig and E.S.I. all gave high yields and are being grown for further test.

The early outdoor tomato staking plot again produced earlier fruit over unstaked plants. A paper mulch plot of the staked tomatoes produced an increase yield of .5 pounds per plant up to August 19th, but it is doubtful if this would be enough to show a profit over cost of paper unless a very good price was obtained for the early fruit. A total gain of one pound per plant was recorded for the whole season in favour of the paper mulch. A fertilizer test on potatoes gave outstanding yields in favour of a high grade fertilizer carrying a high potash analysis. A home mixed 6-6-10 fertilizer applied at rate of 1,000 pounds per acre in the row at planting time gave higher yields than a 4-8-4 or a 15-30-15 applied at comparable rates.

Variety test plots were maintained of many vegetable crops including many new strains and varieties.

Plant Breeding

Strawberries.—Selected seedlings from the breeding work of 1923 and earlier were set out this year for a final test. It is expected that many will be discarded but it is hoped that several will be found that are worthy of being retained for increase and possible distribution.

Crosses made in 1925, as given in the report for 1926, have reached the stage where selected seedlings are in a short row test. As a result of the first selection made in 1926, sixty-five plants were saved as being worthy of inclusion in this test. Plants of these selections were set out in 1928. These fruited in 1929 when they were critically examined for plant and fruit characteristics. As a result of this examination fifteen only were retained for further trial. These will fruit again in 1930 and will be increased for trial with growers. The two crosses giving the largest number of promising seedlings are: Early Ozark by Seedling No. 180115 (Admiral x [Dunlop x Ozark]) with seven worthy of further testing out of 372 seedlings originally grown; and Early Ozark by Royal Sovereign with four out of 249 seedlings saved for further test. The crosses, Crescent by 180115, and Crescent by Dunlop, gave no seedlings out of 555 and 385 seedlings respectively that were worthy of a second test.

In 1927, twenty new crosses were made as follows:

Cross	Number plants set out	Number of seedlings selected
Howard 17 x Vanguard	160	14
180115 x Vanguard	320	7
Vanguard x 180115	160	8
Vanguard x Campbell's Early	160	2
Campbell's Early x Vanguard	160	3
Campbell's Early x 180115	80	1
19322 (Vandyke) x 180115	80	1
Howard 17 x Campbell's Early	80	2
Valonia x Campbell's Early	160	4
Campbell's Early x Dunlap	80	0
14083 x Vanguard	240	2
14083 x Vantage	240	0
Vantage x 14083	400	0
Dunlap x Vanguard	240	0
Vantage x Valonia	80	0
Howard 17 x 180115	160	7
180115 x Bliss	80	0
Bliss x 180115	80	0
Portia x Vantage	240	0
Portia x 14083	160	0

The selected seedlings above enumerated will be propagated in 1930 for further test. Two new strawberry varieties, one from Ontario and the other from British Columbia were sent to this Station for trial in conformity with the Dominion Plant Registration Scheme. These will fruit here for the first time in 1930.

Raspberries.—Practically all the breeding work with the raspberry has been done with the red type although some crosses were made between this and the white fruited "black" raspberry which are of scientific interest.

Seedlings from the 1925 crosses, viz., Viking x Adams 87, Viking x Adams 34, Viking x Adams 101, Adams 87 x Viking, Adams 34 x Viking, and Adams 101 x Viking, have been growing as individual plants since 1926. These were all examined very closely in 1928 and 1929, and in the latter year fifty-seven were finally selected for propagation and further trial.

Seedlings of 1926 breeding fruited last year but no selections were made. This will be done in 1930. It is planned to make further crosses for resistance to "mosaic" in 1930.

The Viking variety which, as stated in previous reports, originated at this Station, is apparently making a place for itself. It is highly spoken of in Quebec and the Maritimes as well as becoming a recognized variety of merit in Ontario. In some cases it is displacing the old established Cuthbert variety. Most of the leading nurseries report being entirely sold out of plants of this variety at this date (December, 1929).

Grapes.—The grape breeding work has again been extended this past season. The object of such work is however, changing from year to year. Some years ago it was apparent that an earlier type of grape was the direct need of the industry. At that time practically fifty per cent. or more of the crop was sold for home consumption. To-day we find that seventy-five per cent. or more of the grapes produced are eventually sold for winery use. Such being the case it has become necessary to consider some of the requirements of a wine grape. Principal among these requirements are deep coloured juice and a higher sugar content. With this object in view we have interbred early black varieties, commercially grown farther south of us but which have shown great hardiness over a period of ten years or more under our conditions, with some of our commercial black and also blue and red varieties. During the past season the following breeding work was done.

Cross	Seeds secured and planted
Lindley x Patricia	450
King Philip x Lomanto	70
x Patricia	78
x Agawam	26
Herbert x Lomanto	336
x Patricia	246
x Agawam	573
x Winchell	147
x Nitodal	300
Wilder x Manito	36
x Lomanto	120
x Patricia	720
x Agawam	630
x Winchell	420
x Nitodal	150
Brocton x Campbell	564
x Winchell	600
x Self	500
Champanel x Winchell	63
x Self	2,220
Xinta x Brocton	120
x Self	150
Lomanto x Campbell	1,520
x Self	2,520
Duchess x Eumelan	700
x Self	500
Manito Selfed	680
Nitodal Selfed	950

In our seedling block one seedling of outstanding merit was discovered. This is Grape Seedling No. 24301, a cross between Salem and Captivator. This seedling was early, black, and had a good sized compact bunch and very good quality. It also possessed a deep purple juice. Further outstanding features about it were its early bearing, and pronounced tendency for heavy production. This selection will be propagated as rapidly as possible for further testing.

Peaches.—The peach breeding work was continued during the past season. Four crosses were made with a total of 1,035 fruits harvested:

Cross	Pits secured
J. H. Hale x Vedette	65
J. H. Hale x Valiant	70
June Elberta x Vedette	300
194055 and 1940149 Seedlings	600

With reference to the named seedlings, Vedette, Valiant, and Veteran, favourable reports were received. Valiant particularly has showed its superiority in canning tests made during the past season. The outstanding quality and perfect canned appearance was much commented on by the canners. Veteran, a large globular peach, yellow fleshed, and a freestone, began to bear with several of the growers this past season. Reports coming in are that it has outstanding merit in size and quality, and that it comes into bearing just before Elberta. Nursery propagation of these varieties is still behind the demand for them.

One seedling has been added to the named list this past year. This is seedling No. 194055, a cross of Vaughan x Early Elberta, and has been named *Viceroy*. It was considered advisable to name and officially introduce the variety in view of the many favourable reports as it has given excellent promise in extensive tests with peach growers. The fruit is large and handsome in appearance, yellow flesh and a freestone. The flesh is fine grained, of good colour and quality. In season it is two to three weeks before Elberta.

Sweet Corn.—Breeding work with sweet corn is being continued and considerably extended. Progress is necessarily slow as the system followed involves the segregation of superior strains from commercial stock seed, then recrossing the most promising of these and building up therefrom new vigorous strains for use by the commercial growers. A number of these strains are now on hand and it is expected that they will be recrossed in the near future with the hope that improved stocks of seed will be available for distribution. This work is being carried on almost exclusively with the Golden Bantam and Evergreen varieties. Incidentally it may be mentioned that the Canners Seed Co. are much interested in this work.

Greenhouse Cucumbers.—A fairly intensive study of the genetics of the cucumber has been made during the last two years so that now we have a considerable amount of information on the inheritance of a number of characters of this plant. A careful study of varieties was made prior to making new crosses and various characters in each were observed and studied. These characters included size and shape of fruit, colour of fruit and spines, texture of skin, wartiness, size of leaf, density of foliage, etc. Also the phenomenon of fruit formation without pollination which is known technically as parthenocarpy. This latter characteristic is of great importance to the commercial grower as varieties that possess it to a marked degree do not need to be pollinated in order to produce a commercial crop. A number of crosses were made and from these one was selected that showed considerable promise of producing a worthwhile commercial variety. This has been taken to the third generation and the fourth will be grown in 1930. If no great improvement is found in this cross other crosses will have to be carried on.

Tomatoes.—During 1929 over forty varieties or selections were grown and fruited. This included fifteen distinct hybrids mostly of the fifth or later generation as well as special strains of standard varieties and also some recently introduced varieties. Out of a number of various tomato hybrids which have been grown during the past few years a selection from the Grand Rapids x Earliana cross gives promise of being worthy of introduction. This hybrid, as previously reported, gives greatly increased vigour of growth in the first generation as well as smoothness and uniformity. Our selection No. 281 from this cross is very productive and the fruit is a smooth deep type of medium size. This strain is well adapted to growing on stakes for the early market and also for indoor crops. Some first generation hybrid seed of this cross was given out to a few growers in 1928 and 1929 and reports were all very favourable.

Other Vegetables.—Several pepper hybrids were fruited in 1929 and some very promising selections were made of productive plants carrying medium to large, solid, thick fleshed sweet peppers. A start was made in asparagus breeding by isolating a number of high yielding plants of the Mary Washington variety. Selection and seed production is being continued with early cabbage, beets, carrots, onions and celery. Seed of some of our selected lines has been sent out to growers for trial and many favourable reports have been received.

Extension

Inspection of Nursery Stock for Varietal Mixture.—A five-year summary of this work is shown in the accompanying table:

Year	Total number of trees examined	Total number of mixtures found	Mixture (in per cent. of total)
1925	856,100	14,421	1.7
1926	659,350	12,399	1.9
1927	705,500	5,230	0.7
1928	669,700	3,500	0.5
1929	599,200	2,123	0.35

The above table summarizes the results of nursery inspection for varietal mixtures in fruit tree stock from the inception of the service up to date—five year's results. In 1929 only 0.35 per cent. of the trees were untrue to name in the nursery row. This is the best record of the five years. Practically all the fruit tree stock grown in Ontario is now being annually inspected for mixture.

Spray Service.—A spray service for Niagara District fruit growers was started in 1923 by the Dominion Laboratory of Plant Pathology, St. Catharines. In 1929 this service was taken over and extended by the Horticultural Experiment Station. The work was under the immediate supervision of the Extension Specialist who had associated with him two experienced fruit growers.

The service embraced 553 active fruit grower members, each of whom was visited between two and three times during the spraying season. These visits supplemented fifteen spray circulars sent out from time to time as conditions necessitated.

Grape Survey.—As a possible preliminary to a more extensive survey, a complete grape survey of Louth Township was made in the fall of 1929. The figures as to acreage which this survey shows are of interest.

In the above township the grape acreage in 1926 was approximately 1,300 acres. This constituted about one-sixth of the total acreage in the Niagara Peninsula (Lincoln, Welland and Wentworth Counties) which at that time approximated 8,000 acres (as calculated from the Dominion census of 1921). Growers in Louth Township have planted additional acreage since 1926, as follows: 1927, 150 acres; 1928, 300 acres; 1929, 300 acres; and propose to plant something over 300 acres in 1930.

Using these figures for Louth as a basis for computation and assuming similar increases in other townships and counties, it seems likely that over 4,000 acres have been set out in the period 1927-29. Further, new plantings are being set out at the rate of 1,800 to 2,000 acres per year. Present acreage is not less than 12,000 (8,000 up to 1926, plus 4,000, 1927-29).

DAIRY BRANCH

The extreme drought during the summer months and the exporting of many dairy cows had a marked effect on the output of cheese in the Province. These conditions did not seem to affect the creamery industry to the same extent. The dry hot weather also affected the quality of both cheese and butter considerably, and the record was not as good as in 1928. The percentage of first and special grade cheese dropped about one and a quarter per cent. or 95.49 against 96.7 per cent. in 1928.

The average price for cheese was about 17 3-8 cents against 21 cents in 1928. The average price for butter was about 38 cents, one cent above 1928.

The Cheesemakers' Clubs throughout the Province continued to function successfully through the season and the getting together of the makers from time to time in this way did much to keep up the quality of the cheese throughout the very trying season.

A Buttermakers Certificate Holders' Club was organized in Huron and Grey Counties and the results were quite noticeable in a better understanding among the makers regarding the grading and testing of cream.

Instruction at Cheese Factories

The Department was unfortunate in losing the service of Mr. G. G. Publow as chief instructor at cheese factories in Eastern Ontario. On account of ill health, Mr. Publow tendered his resignation on the first of April. No man was better known in Eastern Ontario than G. G. Publow. It is doubtful if there is a man in the world who knows the art of making cheddar cheese so thoroughly as Mr. Publow, and the splendid record made in 1928 was a fitting tribute to the forty years service he gave to the cheese industry in Ontario.

The same staff of instructors were employed as in 1928. The instruction work at cheese factories in Eastern Ontario was directed from the office of the Director of Dairying, Toronto. In addition to instruction work the instructors tested the composite milk samples at 661 factories, thirteen less than in 1928.

The following tables show the number of plants, patrons, number of makers' certificates issued, and the quantities and quality of the cheese and butter:

Cheese Factories

Northern Ontario	13
Eastern Ontario	645
Western Ontario	83
Total	741

	Patrons 1929	Patrons 1928
Northern Ontario	309	330
Eastern Ontario	22,376	22,182
Western Ontario	5,265	4,985
Total	27,940	27,497

Pounds Cheese Manufactured

	1929	1928
Northern Ontario, May 1st to October 31st	620,825	732,958
Eastern Ontario, May 1st to October 31st	63,368,804	75,153,096
Western Ontario, January 1st to October 31st	14,122,549	16,591,530
	78,112,178	92,477,584

QUANTITY AND QUALITY OF CHEESE BY PROVINCES AS SHOWN IN FEDERAL GRADERS' REPORTS FOR 1929

	Number of Boxes	Special and First Grade
		Per Cent.
Ontario	875,022	95.49
Quebec	381,763	86.34
Prince Edward Island	15,378	97.07
New Brunswick	489	68.70
Manitoba	1,222	95.99

QUANTITY AND QUALITY OF ONTARIO CHEESE BY DISTRICTS AS SHOWN BY THE FEDERAL GRADERS' REPORTS, 1929

	Number of Boxes	Specials and Firsts
		Per Cent.
Northern Ontario	6,149	96.24
Eastern Ontario	455,128	94.63
Central Ontario	259,446	95.87
Western Ontario	154,299	97.34

QUALITY OF ONTARIO CHEESE IN THE DIFFERENT INSTRUCTORS' GROUPS

3 groups..................98 per cent. and under 99 per cent. special and first grade cheese
5 groups..................97 " " 98 " " " " "
5 groups..................96 " " 97 " " " " "
9 groups..................95 " " 96 " " " " "
5 groups..................94 " " 95 " " " " "
6 groups..................93 " " 94 " " " " "
2 groups..................— " " 93 " " " " "

QUANTITY AND QUALITY OF CHEESE IN THE DIFFERENT COUNTIES—FEDERAL GRADERS' REPORT FOR 1929

	Number of Boxes	Specials and Firsts
		Per Cent.
Addington	18,542	92.05
Bruce	1,899	95.58
Carleton	44,006	95.74
Dundas	46,731	94.77
Durham	215	100.00
Elgin	6,325	95.72
Frontenac	62,821	94.72
Glengarry	52,269	95.66
Grenville	23,749	93.15
Hastings	71,959	97.75
Huron	4,537	93.12
Lambton	532	100.00
Lanark	30,571	94.49
Leeds	80,443	91.40
Lennox	24,654	95.35
Middlesex	37,904	98.22
Nipissing	6,149	96.24
Northumberland	34,029	96.00
Oxford	56,954	98.08
Perth	38,343	96.91
Peterboro	17,650	97.08
Prescott	80,625	95.62
Prince Edward	27,761	95.57
Renfrew	8,074	95.79
Russell	54,336	95.90
Stormont	34,324	95.52
Victoria	1,815	97.58
Waterloo	7,627	95.36
Welland	178	33.71

NUMBER OF CHEESEMAKERS' CERTIFICATES ISSUED

	1st Class	2nd Class	Permits	Total
1929	532	181	105	818
1928	380	159	202	741

INSTRUCTION AT CREAMERIES

The creameries are located as follows:

	1929	1928
Toronto and west	158	168
East of Toronto	82	83
Northern Ontario	25	28
	265	279

CREAMERY PATRONS

	1929	1928
Northern Ontario	4,224	4,218
Southern Ontario	74,665	78,914
	78,889	73,132

CREAM GRADING—QUALITY OF CREAM GRADED BY THE INSTRUCTORS

	Sp. Grade	1st Grade	2nd Grade	Off Grade
	Per Cent.	Per Cent.	Per Cent.	Per Cent.
1927	3.8	76.5	19.1	0.6
1928	5.5	73.6	19.5	1.4
1929	3	80.4	16.5	.1

BUTTER GRADING STATION

Creameries taking advantage of grading and number of churnings graded:

	Number of Creameries	Number of Churnings
1929	124	18,626
1928	139	24,031

Many creameries send samples to the Grading Station only from the churnings that are put into solids. Less butter was packed in 56-pound boxes in 1929 than usual. This accounts for part of the shrinkage in churnings graded:

QUALITY OF THE BUTTER GRADED

	Sp. Grade	1st Grade	2nd Grade	Off Grade
	Per Cent.	Per Cent.	Per Cent.	Per Cent.
1929	0.54	73.52	25.23	.71
1928	2.03	76.60	21.17	.20

COW TESTING WORK

Two full-time men are on this work. They test monthly at ninteen points. Nearly all the herds tested are supplying milk for human consumption. A few herds are tested at cheese factories and creameries by the diary instructors. The charge for testing is fifty cents per cow per year.

EASTERN DAIRY SCHOOL

The school was operated as usual as a cheese factory and creamery from April 1st to December 31st, and the regular dairy school course in January, February and March. The attendance was as follows:

Regular long course, January 1st to March 28th	36
Special cheese and buttermakers' course	54
Instruction course	35
	125

MANUFACTURING STATEMENT FOR THE FISCAL YEAR, NOVEMBER 1ST TO OCTOBER 31ST, 1929

Butter manufactured	116,152 lbs.
Pounds butter per 100 pounds fat	124.2 lbs.
Average price paid the patrons per pound fat	44.8 cts.
Cheese manufactured	72,435 lbs.
Average price per pound cheese	19.71 cts.
Milk per pound cheese	11.55 lbs.
Cheese per pound fat	2.59 lbs.
Price paid patrons per pound fat	44.20 cts.

AGRICULTURAL REPRESENTATIVE BRANCH

The Agricultural Representative Branch continued to carry along its extension work in a very effective manner during the past fiscal year. A perusal of the reports clearly indicates that, to a greater extent than ever before, the Agricultural Representatives are playing a very important part in moulding the trend of agriculture in the Province. Since the year 1925, at which time each Representative concentrated his efforts on making an agricultural analysis of his county or district, agricultural development has taken more definite form.

The following summary of detailed statistics indicates the extent of service that is being demanded of the fifty-one Representatives:

County	No. of letters received	No. of letters written	No. of circulars mailed	No. of incoming telephone calls	No. of visitors at office	No. of meetings held in office	No. of bulletins and reports distributed	No. of miles travelled by motor
Algoma	1,991	1,738	3,537	3,159	1,988	5	753	9,347
Brant	3,570	2,437	13,905	3,374	848	63	370	9,692
Bruce	2,000	1,800	12,000	1,000	700	12	1,150	30,000
Carleton	1,663	1,610	3,694	1,450	736	44	884	17,654
Cochrane	1,081	1,029	1,048	275	885	5	850	7,959
Dufferin	2,600	2,450	8,500	1,950	2,200	20	2,100	9,800
Dundas	1,958	1,690	7,000	1,550	1,400	100	625	15,711
Durham	1,733	1,402	10,875	855	1,154	27	1,040	18,265
Elgin	2,328	2,018	10,415	2,934	3,000	75	2,800	31,980
Essex	3,055	2,474	28,988	2,368	3,159	16	1,235	20,000
Frontenac	2,051	1,492	6,288	2,833	1,386	102	1,165	13,584
Glengarry	1,293	1,013	7,243	1,810	774	6	231	13,400
Grenville	1,075	977	4,163	1,601	634	10	276	17,500
Grey	5,825	6,200	16,456	4,250	4,925	89	6,000	31,700
Haldimand	1,472	2,039	5,166	1,528	988	6	1,065	21,000
Halton	1,657	1,475	6,342	1,918	1,775	20	648	23,000
Hastings	1,150	1,140	3,157	985	990	53	2,200	16,150
Huron	3,163	1,791	13,521	1,605	1,642	22	1,800	29,000
Kenora	940	1,032	8,000	71	641	14	281	8,500
Kent	2,550	2,600	12,400	2,718	2,150	32	1,600	14,150
Lambton	2,497	2,145	5,366	934	2,417	22	633	17,500
Lanark	2,227	953	5,832	578	1,548	36	500	17,521
Leeds	1,617	1,424	7,261	637	953	10	428	15,798
Lennox and Addington	2,277	2,206	4,095	2,195	1,904	40	1,000	14,799
Lincoln	2,589	2,023	9,684	1,214	1,104	55	1,046	21,189
Manitoulin	1,275	1,280	3,411	1,064	1,627	30	412	13,400
Middlesex	2,241	2,904	17,739	2,329	3,052	74	2,640	30,000
Muskoka and Parry Sound	2,818	2,249	14,398	1,400	1,248	6	567	13,675
Norfolk	2,312	1,850	19,555	1,713	2,943	46	1,230	16,345
Northumberland	1,793	1,725	6,020	2,117	2,048	20	700	14,700
Ontario	2,450	3,100	16,000	1,400	1,350	35	1,600	17,300
Oxford	3,310	3,849	25,580	1,892	3,668	21	736	17,056
Peel	3,300	3,776	5,293	8,300	6,027	32	8,084	17,150
Perth	2,500	2,000	2,470	1,000	950	65	400	22,130
Peterboro	1,825	1,500	5,500	1,200	1,760	36	3,000	17,000
Prescott and Russell	3,195	3,572	13,790	4,850	2,940	6	8,925	19,751
Prince Edward	1,910	915	2,435	750	2,670	29	1,000	15,000
Rainy River	1,525	1,291	4,613	1,584	2,507	14	816	14,546
Renfrew	1,810	1,417	7,802	669	949	15	6,190	14,400
Simcoe North	2,736	2,264	11,900	1,644	1,444	26	6,725	11,000
Simcoe South	1,322	1,270	2,654	1,726	2,648	7	300	20,000
Sudbury	1,320	1,089	3,090	1,009	890	....	290	13,800
Temiskaming	2,561	3,113	6,474	3,000	2,000	1	600	13,300
Fort William	1,435	1,133	8,128	1,535	918	....	725	15,500
Port Arthur	503	790	10,164	761	733	3	2,730	15,062
Victoria	1,625	1,780	2,900	900	2,050	38	500	11,500
Waterloo	1,000	1,100	4,390	2,562	2,000	100	321	20,330
Welland	1,435	1,477	4,169	1,825	1,520	22	2,500	20,000
Wellington	1,696	1,472	10,037	360	957	37	8,067	17,609
Wentworth	2,834	2,150	20,000	3,230	6,340	34	7,800	37,000
York	3,394	4,305	7,750	1,721	2,711	22	1,200	29,000
Totals	108,487	100,529	451,198	103,333	97,859	1,603	98,738	911,753
Average	2,127	1,971	8,847	2,026	1,918	31	1,952	17,877

Besides the detailed statement of office work performed, Representatives come in touch with a great many people in the Province. The table given below indicates the number of contacts made by the Representatives during the past year:

MEETINGS ATTENDED BY THE REPRESENTATIVES

County	Number of Meetings	Attendance
Algoma	44	1,350
Brant	65	2,274
Bruce	39	1,548
Carleton	65	2,670
Cochrane	34	1,742
Dufferin	48	3,455
Dundas	15	663
Durham	66	2,378
Elgin	125	8,030
Essex	92	5,741
Frontenac	60	1,313
Glengarry	47	2,302
Grenville	17	980
Grey	81	4,825
Haldimand	50	3,161
Halton	57	2,671
Hastings	26	870
Huron	83	8,512
Kenora	27	901
Kent	76	3,386
Lambton	21	599
Lanark	32	1,335
Leeds	44	2,688
Lennox and Addington	26	1,337
Lincoln	87	6,187
Manitoulin	82	7,242
Middlesex	70	2,955
Muskoka and Parry Sound	19	1,240
Norfolk	44	1,709
Northumberland	36	942
Ontario	58	2,863
Oxford	54	1,476
Peel	90	5,717
Perth	52	2,279
Peterboro	44	2,445
Prescott and Russell	80	5,020
Prince Edward	60	1,969
Rainy River	44	2,025
Renfrew	45	2,544
Simcoe North	96	3,377
Simcoe South	25	708
Sudbury	12	1,065
Temiskaming	21	.....
Fort William	78	6,741
Port Arthur	51	4,348
Victoria	30	2,328
Waterloo	40	2,997
Welland	81	3,013
Wellington	58	4,566
Wentworth	100	3,034
York	58	3,703
Totals	2,755	147,214
Average	54	2,886

Some of the lines of work featured by Representatives are depicted in the main activities of the Representative for Durham County:

One Month's Course in Agriculture and Home Economics, held at Millbrook during January.
Twelve Successful School Fairs.
One Championship School Fair.
Spray Service to seventy-six growers, with instructional letters to an additional 150 growers.
County Judging Competition for Boys.
County Judging Compeition for Girls.
County Exhibit at the Canadian National Exhibition.
Apple Exhibit at the Royal Winter Fair.
Special Poultry Short Course.
Special Farm Mechanics Course.
Sheep Dipping, Tank Building and Ram Grading.
Pure Bred Live Stock Sales—Holstein and Shorthorn.
Girls' Judging Team at the Canadian National Exhibition.
Boys' Inter-County Judging Teams.
Public Speaking Contest for Junior Farmers and Junior Girls.
Inter-County Debating Contest.
Two Potato Field Days.
Judging Team at District Seed Fair.

Generally speaking agriculture has had only a fairly prosperous year; but, in spite of a wet spring and dry summer, which reduced crop yields and live stock prices which were only partly satisfactory, social and business conditions on the farm are on the verge of important changes.

These changes are indicated by the following conditions:

1. Increased interest in all branches of education.
2. Increasing number of new houses and barns.
3. Increased activity in underdrainage.
4. Demand for clean seed.
5. Growing demand for Hydro power.
6. Increasing number of conveniences in farm homes.

A few years ago the farmer had to be persuaded to instal water systems, to sell intelligently and to farm scientifically. Now he is demanding all the, knowledge and information he can get which will enable him to live better, and to produce more per acre with less man power.

Live Stock Improvement

Realizing that the live stock industry plays an important part in maintaining permanent and prosperous Agriculture, considerable time has been devoted to the improvement of all types of live stock. There are now five Counties in Ontario which have passed By-Laws declaring them "Better Bull Areas." They are as follows; Oxford, Perth, Wellington, Peel and Bruce; the latter two having been added during the past year.

With the co-operation of the Ontario Live Stock Branch, bonuses have been paid to assist in the replacing of grade sires with pure breds, and the following table shows, to some extent, the replacement during the past year:

County	Number of Bonuses Paid	Amount of Bonuses Paid
Algoma	12	$321 00
Bruce	23	580 10
Cochrane	16	457 50
Lambton	11	265 80
Lennox and Addington	8	161 00
Manitoulin	6	225 00
Muskoka and Parry Sound	16	666 90
Ontario	17	418 00
Oxford	1	30 00
Peel	9	202 00
Perth	12	273 00
Prince Edward	5	107 00
Rainy River	14	390 00
Sudbury	4	115 50
Temiskaming	15	576 00
Fort William	6	185 00
Wellington	11	263 00
Totals	186	$5,237 40

During the year a large number of dairy cattle have found a ready market in the United States. This has given impetus to live stock improvement work as many small breeders now find that they can dispose of their surplus stock, providing it is of good quality, at satisfactory prices. A prominent farmer in Oxford County makes this statement regarding the situation:

> "Oxford has never enjoyed a more prosperous year, as far as the sale of cattle is concerned. The cattle remaining are up to strength as far as numbers are concerned, and the quality was never as good. This is attributed to three things: First, the work of the Oxford Live Stock Improvement Association, in emphasizing the need for better sires; second, the work which has been done through the local branch office of the Department of Agriculture in educating the younger generation as to the type desired; and third, the good prices paid for animals of the right type."

Eradication of Bovine Tuberculosis

The campaign for the eradication of bovine tuberculosis in the Province continued and it affords a great deal of satisfaction to know that the testing of the second tuberculosis free area has commenced, the area being tested including counties in the eastern part of the Province. It is interesting to note the attitude of the farmers in Prince Edward County, which was the first restricted free area in the Province. The following statement of the Agricultural Representative indicates the favour in which it is regarded:

> "The test has been of untold advantage. Cattle prices and demand have increased; premises have been cleaned up; better breeding and feeding methods have been adopted; then, best of all, the people are much healthier since the reactors have been removed and no milk with T.B. germs is being used. One school of some forty-three pupils, where the Board employs a physician to give medical inspection to the pupils, made the following statement, that 'in the spring of 1927, out of these forty-three pupils, seventeen of them showed symptoms of tubercular trouble. However, in the inspection of 1928 only three pupils showed any symptoms of the disease.' The doctor attributed this improvement to a purer milk supply. It should also be mentioned that this School Section had a large number of reactors in the first test. This one case in itself would make this project worth while."

COW TESTING

Cow testing was carried on in a number of counties during the past year, and although there are fewer dairymen taking advantage of this service than in previous years, it is felt that a great deal of good has been accomplished. Many of the herds after completing one or more years in a Cow Testing Association have been entered under "Record of Performance" work. The mere fact that farmers have become convinced that their herds should be tested and have seen fit to put their herds under R.O.P. supervision is ample evidence that this phase of Agricultural Representative work should be continued. The following table gives the number of herds entered and the number of cows tested:

County	Number of Herds	Number of Cows
Algoma	16	195
Brant	5	62
Carleton	6	110
Durham	8	107
Frontenac	3	47
Grenville	4	34
Haldimand	2	18
Huron	4	104
Kenora	1	11
Norfolk	17	151
Ontario	2	27
Oxford	7	75
Peel	32	494
Perth	10	121
Peterborough	1	17
Prescott and Russell	2	...
Simcoe North	2	24
Waterloo	8	97
Welland	13	122
Wentworth	20	190
York	53	629
Totals	216	2,635

Under this testing some high producing herds have been discovered, as for example: A farmer in Kenora District has a herd of eleven cows, one cow with a record of 18,000 pounds of milk, with a test of 4.5 per cent. and the lowest producer in the herd will reach the 9,000-pound mark with a test of 3.8 per cent.

The following figures from the report of the Representative for Peel County supply concrete evidence that cow testing is a primary step in determining the profit and loss in any dairy herd:

Number of herds	Cows on test, 1929	Cows on test, 1928
32	494	705

49 cows tested over 4.00 per cent. butter fat.
102 cows tested 3.50-4.00 per cent. butter fat.
88 cows tested 3.25-3.50 per cent. butter fat.
81 cows tested under 3.25 per cent. butter fat.

320 cows completed year ending June 30th, 1929.

	Whole Milk			Butterfat	
	Pounds Milk	Value $2.00 Cwt.	Average Test	Total Pounds	Value .45 Cents Pound
Best milk cow	14,390	$287 80	3.32	478.8	$215 46
Poorest milk cow	3,360	67 20	5.14	172.8	77.76
Difference	11,030	$220 60		306.0	137 70
Best butterfat cow	13,120	$262 40	4.19	550.9	$302 99
Poorest butterfat cow	3,890	77 80	3.65	142.1	78 15
Difference	9,230	$184 60		408.8	$224 84

Comparison of Twenty Best Cows and Twenty Poorest Cows

	Average Pounds Milk	Average Pounds Butterfat	Average Per Cent. Butterfat
Twenty best cows	12,481	421	3.37
Twenty poorest cows	4,415	174	3.95
Difference	8,066	247	

Value of increase at $2.00 cwt	$161 32
Value of increase at .45 cents pound butterfat	111 15

Comparison of High and Low Herds

	Number of Cows	Pounds of Milk	Pounds of Butterfat
High herd	10	10,946	393
Low herd	14	6,038	220
Difference		4,908	173

Value of average increase—4,908 pounds milk at $2.00 cwt	$98 16
Value of average increase— 173 pounds butterfat at .45 pound	77 85

SHEEP

Breeders of sheep are quickly awakening to the realization that a large percentage of the sheep in Ontario are infested with internal parasites. In practically every part of the Province there were demonstrations in the control of internal parasites. The Agricultural Representatives, co-operating with Dr. L. Stevenson, the Provincial Zoologist, conducted the following demonstrations:

County	Number demonstrations	Number in attendance	Animals treated in demonstrations	Estimated total treated in county
Algoma	1	7	36	150
Carleton	35	...	1,815	3,200
Dufferin	...	75	400	1,500
Durham	4	34	130	280
Grenville	...	...	...	2,500
Grey	31	725	450	7,000
Haldimand	2	75	100	500
Hastings	4	47	8	1,000
Huron	5	175	155	2,000
Lambton	1	15	33	....
Lanark	30	...	600	2,000
Lennox and Addington	2	...	100	....
Manitoulin	5	693	75	1,000
Middlesex	6	180	200	3,500
Muskoka and Parry Sound	3	97	112	500
Ontario	4	86	...	2,000
Peel	2	35	12	1,000
Perth	4	165	...	....
Rainy River	1	13	15	500
Renfrew	1	25	350	1,600
Simcoe North	3	70	30	500
Simcoe South	1	28	40	1,000
Temiskaming	3	75	...	500
Port Arthur	1	15	90	90
Victoria	3	87	112	1,200
Wellington	1	15	...	5,000
York	6	150	975	3,000
Totals	159	2,887	5,838	41,520

Sheepmen also realize the value of dipping and are making it a regular part of sheep management. The following table gives a list of the dipping tanks installed under the supervision of the Agricultural Representative, in each county, along with the number of sheep being treated:

County	Tanks installed 1929	Total tanks in county	Sheep dipped in demonstration	Estimate sheep dipped in county
Algoma	11	12	2,270	2,780
Brant	2	9	....	2,500
Bruce	...	38	....	8,000
Carleton	6	21	400	2,500
Dufferin	1	21	250	3,000
Dundas	...	3	....	400
Durham	8	31	816	3,750
Elgin	...	19	....	700
Frontenac	2	14	....	2,500
Glengarry	...	2	55	230
Grenville	...	11	....	800
Grey	12	80	1,500	30,000
Haldimand	2	19	400	3,500
Halton	...	6	....	1,231
Hastings	6	12	3,000	5,000
Huron	4	23	1,162	3,500
Kenora	2	4	....	300
Kent	1	13	....	3,600
Lambton	2	...	....	....
Lanark	6	47	864	14,000
Leeds	...	6	....	850
Lennox and Addington	2	25	175	3,000
Lincoln	2	8	850	2,600
Manitoulin	...	27	....	1,200
Middlesex	3	40	100	4,000
Muskoka and Parry Sound	1	8	520	3,500
Ontario	2	25	2	2,500
Oxford	...	11	....	3,000
Perth	...	3	....	....
Peterborough	1	28	40	1,000
Prescott and Russell	1	8	300	....
Prince Edward	1	2	150	500
Rainy River	2	18	....	3,500
Renfrew	4	27	542	5,000
Simcoe North	4	11	....	5,000
Simcoe South	3	18	....	4,500
Victoria	2	31	96	2,500
Waterloo	1	2	50	500
Welland	...	1	263	400
Wellington	7	38	1,065	8,750
Wentworth	1	5	....	450
York	8	43	1,155	5,000
Totals	110	770	16,023	177,541

The more farmers become familiar with the benefits derived from dipping sheep, the more requests are received for the installation of tanks. As for example, in the County of Grey there are now eighty sheep-dipping tanks, twelve of which were installed during 1929. The Agricultural Representatives enjoy the co-operation of officials of the Federal Live Stock Branch, not only in the installation of sheep-dipping tanks, but also in the conducting of two-day courses in sheep marketing, twenty-nine of which were held during the past year. The Agricultural Representatives also gave assistance to a joint policy sponsored by the Ontario and Federal Live Stock Branches in the conducting of Lamb Fairs. The Representative from Lanark County, in which lamb fairs have been held for a number of years, reports as follows:

"Lamb fairs have been a great boon to the sheep industry in this county. The Dominion Government reports from stockyards state that in the production of high grade market lambs, Lanark County stands first. In 1925, there were 325 lambs shipped, grading 38 per cent. choice. In 1929, there were 358 lambs shipped, grading 77 per cent. choice. This is a wonderful increase and the improvement made is having its effect on the county as a whole."

Agricultural Representatives have also played an important part in assisting the Ontario Live Stock Branch in the organization of Demonstration Sheep Clubs, twenty of these having been organized during the past year.

Swine

Practically every county in Ontario reports a decreased interest in the swine industry, due largely to the high price of feed in comparison with the prices received. Only a small number of boar clubs have been organized during the year, but breeders have been giving more attention to the control of internal parasites, and, with the assistance of Dr. L. Stevenson, thirty demonstrations were conducted last year. The experience of T. G. Grant of Kingsville, was very typical of the results obtained following control treatment:

The following is an extract from an article published in the Ontario Farmer and written by Dr. L. Stevenson:

"I first met Jim Grant at the Corn Show held in Essex, February, 1929, when he told me all his experiences with unthrifty pigs and losses. No man ever asked me more questions and no man was ever keener for information than Jim Grant on that day, when we discussed every angle of pig health, and he drew a very gloomy picture of his experiences. But the scene is all changed now. I called at his farm last week and greeted him with the words: 'Well, how are the pigs?' Jim Grant replied: 'The best I ever raised. Pigs four months old now weigh 150 pounds and all the same, no runts this year. I raised them out there in the alfalfa field away from the old pens and yards.'

"The sows were dosed before the pigs were born and the young pigs were given 1 c.c. Nema capsule after weaning. They stayed out on the alfalfa until they were four months old. At this age we considered them big and strong enough to withstand any worm infection that they might pick up in the old yards and pens. So we let them come back to the old ground and pens, where it was handier to feed and water them. We finished the first four litters, thirty-one pigs in all, and sold them at an average of 190 pounds when under six months of age.

"The fifth litter, born later in June, has done even better than the early litters, and will weigh above 200 pounds each when six months old. There are nine pigs left of this litter and they are alike. I have not done all that you government men asked me to do, but I have done enough to bring my pigs back from a condition of utter loss to very profitable production. The worm treatment and the clean alfalfa ground did it. I have gained a knowledge of parasite control and swine hygiene that will be a great value to me as long as pigs are an important part of my live stock."

Co-operating with the Live Stock Branch of the Federal Department of Agriculture, twenty-five swine marketing courses were conducted in the Province. We cannot estimate the good that is being brought about by these educational courses. A marked increase in the number of select hogs being marketed throughout the Province, especially in the southwestern part, is very gratifying.

A project that is proving very popular and, also enlightening, was the Bacon Litter Competition, conducted in co-operation with the Ontario and Federal Live Stock Branches. The following table gives the number of entries made, by counties:

County	Number of entries
Brant	2
Bruce	6
Dufferin	1
Durham	6
Elgin	8
Frontenac	2
Glengarry	2
Grey	5
Haldimand	8
Halton	2
Hastings	4
Huron	5
Kent	2
Lanark	11
Leeds	1
Lincoln	1
Middlesex	21
Norfolk	2
Northumberland	13
Ontario	6
Peel	4
Perth	8
Peterborough	7
Renfrew	9
North Simcoe	3
Victoria	4
Waterloo	20
Wellington	4
Wentworth	4
York	10
Total	187

POULTRY

No live stock industry has ever shown such an increased interest in improvement and increase in numbers as has poultry. The day of the 100-hen flock per farm is passing and now we find that the majority of farmers are carrying 150 to 200 or more laying hens. Culling of poultry has been a major project for a number of years and at the present time it is difficult to find a farm of any size that has not received some attention along this line. With the industry developing as it is, a large number of men are capable of culling their own flocks, and one does not have to travel far to find someone in each community who is sufficiently qualified to do a reasonably good job. It is thought well to continue conducting culling demonstrations.

The following figures summarize the activities of poultry cullers in the different counties:

County	Number demonstrations	Number birds culled in demonstration	Attendance	Estimated total birds culled in county	Number trained cullers in county
Algoma	...	......	......	......	...
Brant	...	......	......	10,000	2
Bruce	19	400	350	20,000	6
Carleton	4	175	60	9,500	14
Cochrane	15	300	900	......	...
Dufferin	...	......	......	15,000	5
Dundas	10	1,660	......	5,000	...
Durham	5	320	89	4,139	3
Elgin	4	500	125	10,000	3
Essex	...	......	......	100,000	6
Frontenac	7	645	143	2,230	1
Glengarry	13	1,290	256	3,500	2
Grenville	...	......	......	......	5
Grey	27	2,400	244	30,000	10
Haldimand	4	100	100	10,000	8
Halton	6	700	40	10,000	3
Hastings	7	500	200	1,500	2
Huron	2	550	27	60,000	6
Kenora	3	250	29	5,000	...
Kent	11	28	52	32,000	7
Lambton	2	......	60	......	...
Lanark	11	300	500	10,000	10
Leeds	...	......	......	3,000	3
Lennox and Addington	7	650	70	26,500	1
Lincoln	8	1,340	98	2,000	3
Manitoulin	1	25	40	1,000	4
Middlesex	9	1,210	231	20,000	5
Muskoka and Parry Sound	1	135	42	4,000	...
Norfolk	...	......	......	2,200	3
Northumberland	12	310	50	1,420	7
Ontario	...	......	......	......	...
Oxford	2	400	30	......	...
Peel	...	......	......	12,000	3
Perth	1	300	30	......	4
Peterborough	2	100	20	20,000	15
Prescott and Russell	3	200	110	800	...
Prince Edward	6	800	100	3,000	2
Rainy River	4	270	57	825	...
Renfrew	11	930	253	6,000	1
Simcoe North	10	......	1,000	30,000	...
Simcoe South	1	120	15	2,000	...
Sudbury	...	......	......	......	...
Temiskaming	...	......	......	......	...
Fort William	2	400	40	1,300	...
Port Arthur	6	610	94	......	...
Victoria	4	455	45	5,000	2
Waterloo	...	......	......	12,000	8
Welland	16	950	105	9,000	4
Wellington	...	......	......	4,000	15
Wentworth	...	......	......	......	...
York	6	970	125	20,000	20
Totals	262	20,293	5,730	523,914	193

FIELD CROP IMPROVEMENT

Better Seed Campaign

In co-operation with the Provincial Field Crop Improvement Committee, a rather intensive campaign was again carried on to encourage the seeding of better grain and the control of weeds.

The Agricultural Representative for Waterloo County states as follows:

> "Our better seed campaign is bearing fruit. Farmers are sowing cleaner seed. There is a greater demand for registered seed grain and certified seed potatoes. The 1929 seed fair held in Galt was the largest in years from the standpoint of attendance and entries."

A similar report was received from the Representative in Renfrew:

> "There was quite a marked improvement in the quality of seed grain sown in the last five years. Weed Inspectors, Seed Cleaning Plants, and the Ottawa Valley Seed Fair have had a marked influence on the improvement of seed grain."

The Representative for Lambton reports as follows:

> "The better seed campaign has been the means of awakening a large number of farmers as to the quality of seed they sow. All the elevators and cleaning plants have been receiving a larger quantity of seed for cleaning than was common three years ago."

The following table of meetings and demonstrations with attendance, gives some idea of the work that has been done in some counties:

County	Number of meetings	Attendance	Number of demonstrations	Attendance
Algoma	2	60	......	......
Brant	5	100	......	......
Carleton	3	125	......	......
Cochrane	7	404	......	......
Dufferin	10	325	1	35
Elgin	27	1,010	......	......
Essex	14	684	......	......
Frontenac	10	226	......	......
Glengarry	4	225	......	......
Grey	4	970	......	......
Halton	2	100	1	40
Hastings	2	38	......	......
Huron	2	50	......	......
Kenora	6	143	......	......
Lambton	2	960	......	......
Lanark	3	....	......	......
Leeds	...	....	1	17
Lennox and Addington	5	143	......	......
Lincoln	...	....	6	195
Middlesex	4	85	2	80
Oxford	2	100	8	400
Peel	4	370	......	......
Perth	16	1,224	......	......
Prince Edward	9	320	......	......
Renfrew	7	374	......	......
Simcoe South	...	....	1	50
Sudbury	2	65	2	46
Fort William	4	82	......	......
Port Arthur	7	413	......	......
Victoria	3	75	2	68
Waterloo	7	350	......	......
Welland	12	844	......	......
Wellington	9	....	......	......
York	1	10	......	......
Totals	195	9,875	25	1,106

WEED CONTROL

The enforcing of the Ontario Weed Act has brought about a decided improvement in the control of weeds, the Agricultural Representatives, in cooperation with the Provincial Weed Inspectors are receiving very encouraging support from the farmers and municipal officials in the destruction of weeds in the fields and the cleaning of roadsides. The following comments are very typical of the results attained:

Agricultural Representative, Huron County:

> "There has been something really accomplished in cleaning up roadsides. Discussing this matter with a number of Weed Inspectors they said that in their municipality, weeds on roadsides this year showed a reduction of at least 50 per cent. Reports of this kind are very encouraging."

Agricultural Representative, Lambton County:

> "The roadsides and waste land, ditches, pastures and lanes have all been cut over once and in some cases twice. A distinct improvement has been noticeable all over the county."

Agricultural Representative, Elgin County:

> "No line of work we have ever undertaken has been so favourably commented on as our 'Sow Thistle Campaign' and we derived a great deal of pleasure, profit and satisfaction from conducting it. The result of our campaign was that we created a strong public opinion in favour of weed control, and we also received more sympathetic support from our township councils and other organizations."

FERTILIZER EXPERIMENTS

Agricultural Representatives are continually being asked for information and opinions regarding the use of chemical fertilizers. The Chemistry Department of the Ontario Agricultural College, with the co-operation of the Agricultural Representatives, conducted a large number of fertilizer experiments throughout Ontario, and although the summer of 1929 was not considered a favourable year, owing to the dry weather, to measure the efficiency of chemical fertilizers, nevertheless, much valuable information was secured. Some idea of the volume of experimental work conducted may be gathered from the following statistics:

County	Number of plots
Algoma	4
Brant	2
Carleton	6
Cochrane	3
Dufferin	16
Durham	6
Frontenac	6
Glengarry	6
Grey	1
Haldimand	3
Huron	41
Kenora	5
Kent	5
Lambton	4
Lanark	6
Leeds	3
Lennox and Addington	4
Lincoln	6
Norfolk	30
Northumberland	15
Ontario	69
Perth	5

County	Number of plots
Peterborough	2
Prescott and Russell	13
Prince Edward	3
Rainy River	2
Renfrew	7
Simcoe North	3
Simcoe South	5
Sudbury	3
Welland	10
Total	288

SEED DRILL SURVEY

In co-operation with the Dominion Seed Branch, the Agricultural Representatives conducted a seed drill survey in a number of counties. The most intensive surveys were conducted in the Counties of Oxford and Victoria. The assistance of the school children was invited in the securing of samples. The report of the Oxford survey is as follows:

"A total of 1,043 samples was collected and only fifty-six were free from weeds and other grains. These samples were graded according to the Dominion Seeds Act, and the samples returned to the farmer. The grades were as follows:

No. 1	451 samples
No. 2	49 samples
No. 3	319 samples
Rejected	224 samples"

The survey in Victoria County applied only to small seeds and samples were secured from the alsike districts. Ninety-nine pupils forwarded samples for analysis which graded as follows:

Grades:

15% tested	No. 1
41% "	No. 2
17% "	No. 3
26% rejected	

Cause of Rejection:

Primary noxious	11%
Secondary noxious	45%
Total weeds	36%
Germination	8%

"If these figures are correct for the county, 84 per cent. of our farmers are sowing below number one seed and 54 per cent. are sowing more than fifty weed seeds per ounce, which means 800 per pound, and 4,000 per acre if rate of seeding is five pounds for alsike. The man who sows 1,200 seeds or over sows 19,200 per ounce and 96,000 per acre at the same rate of seeding.

Only one conclusion can be drawn: Farmers should sow only graded seed and that number one."

Other lines of crop improvement work carried on by the Representatives are:

Assistance in the control of the corn borer.
Field demonstrations in the rogueing of weeds in cultivated fields.
Crop experiments, including rod row trials conducted in co-operation with the Federal Government.

POTATOES

The Agricultural Representatives of North Simcoe, South Simcoe, Dufferin and Peel, in co-operation with and under the direction of the Crops, Co-operation and Markets Branch, organized the Central Ontario Potato Growers' Association, which is made up of the following branches:

Craighurst Alliston Caledon Orangeville Whitfield

To the members of these organizations a field service was given, in which cultural methods, spraying and dusting, disease control, grading and marketing were featured. Potatoes from all branches were marketed under a special brand, in bags, in carload lots of one variety of No. 1 quality or better, and the premium received ran from twenty-five cents to thirty cents per bag over the regular price.

The Counties of Durham, Ontario and York also carried on potato work, although not affiliated with the Central Ontario Potato Growers' Association. In the County of Durham, the Manvers Potato Growers' Association was formed with a membership of thirty-five. Educational meetings besides two very successful field days, were held. The Counties of Ontario and York conducted a Boys' Potato Club, sponsored by the Downtown Kiwanis Club of Toronto, and a "300" bushel club. It is interesting to note the yields obtained by the members of the "300" bushel club of Ontario County, as well as the cost of producing potatoes per bushel:

3 men produced 301.3 bushels per acre at a cost of 17.3 cents per bushel
4 " " 259 " " " " 23.5 " " "
2 " " 243 " " " " 28 " " "

SPRAY SERVICE

The orchard service was again demanded by the fruit growers and special attention was paid to twenty-four counties. The Agricultural Representatives were assisted by spray supervisors who carried on the field work. A number of demonstrations were conducted on "How" and "When" to spray, on top-grafting, rejuvenating old orchards and in the application of commercial fertilizers. The value of the Spray Service is very clearly indicated in the following clipping taken from the Picton *Gazette*, of September 25th, 1929:

WONDERFUL RESULTS ACCOMPLISHED BY SCIENTIFIC SPRAYING—RUSSELL REED TELLS WHY HIS ORCHARD HAS SUCH A BIG CROP THIS YEAR

"If there still remains in Prince Edward County a single doubter as to the efficacy of modern spraying methods in quality apple production, a visit to Mr. Russel Reed's orchard at Yereville would convince even the most skeptical.

"This orchard has a history. It was planted some thirty years ago. The site was a favourable one and the soil suitable for apple production. The trees made a good growth. 'It began to bear a commercial crop at ten years and fifteen years ago the apples sold as high as $300.00 for the crop,' said Mr. Reed. 'It never received any special care. The only spraying it had was for tent caterpillars. The quality of the apples grew steadily poorer. For some seasons the apples went to the evaporator. Then through the inroads of the railroad worm, coddling moth, scab and other orchard pests, the apples became unfit for use, even for cider, so that for the past five years the apples have not been sold from the orchard or used for any purpose. You could not even find an apple fit to eat,' said Mr. Reed to the *Gazette*.

"This year, he continued, 'the local Department of Agriculture, through the Representative, Mr. F. J. Webster, and the orchard expert, Mr. L. Smith undertook to bring it back. The trees were thoroughly sprayed. The orchard has been fairly well pruned and not much trimming was necessary. The result is a magnificent crop of the very best quality apples.

"In former years it has been impossible to find a good apple. This year it is equally difficult to find a poor one. This one year's spraying has brought the orchard into full bearing and eliminated the railroad worm and other apple pests. This year's crop from the five acres of orchard is estimated at from 400 to 500 barrels. Already fifty barrels of Wealthys have been picked to lighten the load on the trees. These have graded eighty to ninety per cent. No. 1."

"But the best evidence of what has been accomplished is a visit to the orchard as was done by a *Gazette* representative. It is a sight to see the trees laden to the ground with first quality fruit. Hundreds of props had to be used all through the orchard to support the overloaded branches. The foliage is green and healthy and the trees have made a good growth this year.

"No more striking demonstration of the value of orchard spraying could be imagined than that afforded by this orchard."

The comment of the Representative for York County shows why the "Spray Service" is valuable:

"This service is of great value to the fruit growers. An inexperienced grower may cultivate, fertilize, prune and even spray, or in other words, spend sufficient time and money to have clean fruit, but just because he does not realize the importance of using the right mixture or the timeliness of the application, has 30 per cent. clean fruit instead of 90 per cent. Here is where the 'Spray Service' makes dollars for the grower.

"This year sprayed orchards had 75 per cent. to 95 per cent. clean fruit (an average of about 90 per cent. on winter varieties and 85 per cent. on fall varieties). Ordinary fruit could scarely find a market, prices offered being from $1.00 to $1.50 per barrel. No. 1 clean fruit sold for $2.50 to $3.50 per barrel."

The Agricultural Representative for Norfolk County reports a grower as saying:

"Saved orchard from probable extinction."

County	Number of men receiving service	Number of letters mailed	Average Number of visits
Brant	24	5	5
Dundas	53	7	3
Durham	76	6	3
Elgin	22	6	6
Essex	33	6	2
Grenville	96	5	....
Grey	197	5	5
Halton	56	6	4
Hastings	20	7	1
Huron	45	17	4
Kent	37	8	2
Lambton	65	5	5
Leeds	29	5	2
Lincoln	553	15	2
Middlesex	66	7	7
Norfolk	116	7	12
Northumberland	110	31	5
Ontario	18	5	4
Oxford	60	5	5
Peel	19	6	4
Prince Edward	190	5	4
Welland	42	7	2
Wentworth	44	5	4
York	13	4	2
Totals	1,984	186	93

SEPTIC TANKS

Early in the year the Physics Department of the Ontario Agricultural College forwarded forms for the installation of septic tanks, to the following counties: Carleton, Cochrane, Durham, Haldimand, Hastings, Lanark, Lincoln, Middlesex, Norfolk, Oxford, Prescott and Russell, Temiskaming and Waterloo. The number of tanks installed is given in the following table:

County	No. of tanks	County	No. of tanks
Carleton	1	Middlesex	5
Grey	1	Norfolk	7
Haldimand	1	Oxford	4
Leeds	3	Temiskaming	2
Lennox and Addington	1	Waterloo	4
Lincoln	2		
		Total	31

The comments of the Agricultural Representative for Waterloo County indicate the interest taken by farmers in the improvement of farm conveniences:

> "We had septic tank forms sent us from the Ontario Agricultural College at Guelph. These have been in steady use since arrival and more interest is shown each year in the improvement of the farm home."

UNDER DRAINAGE

Representatives assist in supplying information to township councils regarding the operation of *The Tile Drainage Act* and also in making a number of surveys. Last year 234 surveys were made by twenty-nine Representatives. Representatives do not make a practice of making large surveys but limit their work to small areas. Surveys calling for a larger acreage are taken care of by the Drainage Department of the Ontario Agricultural College.

FARM LABOUR

In most counties the office of the Agricultural Representative serves as a farm labour bureau. Applications for assistance are received and forwarded to the Ontario Department of Colonization and other organizations. Despite the difficulty in securing sufficient satisfactory farm help at certain seasons of the year, it is a service much appreciated by the farmers.

ADVISORY AGRICULTURAL COUNCILS

The help and guidance given by the Advisory Agricultural Councils to the Representatives is of valuable assistance in acquainting the Representatives with local conditions, and in planning and putting across projects. An indication of the assistance that such a body can render is given in the following statement from the Hastings County report:

> "The Agricultural Committee assisted and fostered School Fair Work. The Championship School Fair was a direct result of their work. They have shown keen interest in the work of the department here. Short courses have been encouraged to the fullest extent, also judging competitions have been given their assistance. They also took an active part with the Canadian National Exhibition exhibit. Practically all members made a personal visit to the exhibit this year, which met with their approval."

SERVICE CLUBS

This report would not be complete if some reference were not made to the excellent co-operation given by the many Service Clubs throughout Ontario, in helping to advance the interests of agriculture. In a great may counties, Service Clubs are fostering Junior Extension Work such as Potato Clubs, Seed Grain Clubs and a Junior Section of the Fall Fairs.

The service they render is difficult to estimate but is highly appreciated by the Department, and is doing a great deal to create better understanding between rural and urban people.

WOMEN'S INSTITUTES

In practically every county the Women's Institute and the Agricultural Representative work goes hand in hand in shaping and developing community life in the rural districts. The remarks of the Representative in Temiskaming District indicate the important part being played by these Institutes in furthering agriculture:

> "We cannot speak too highly of the splendid assistance the Women's Institutes of the district have given in connection with all lines of work, pertaining to the development and advancement of Temiskaming agriculture. Special reference must be made to the support received in connection with school fairs, judging competitions and in the relief of specially needy cases throughout the district.

FARMERS' EDUCATIONAL TOURS

"To widen the horizon is to increase Education!" With this thought in mind many Agricultural Representatives have planned farmers' tours:

County	No. of tours	Attendance
Brant	2	30
Bruce	2	..
Cochrane	1	350
Dundas	1	6
Durham	1	150
Elgin	1	100
Essex	1	30
Glengarry	1	47
Haldimand	2	263
Hastings	1	16
Kent	1	16
Lambton	1	36
Lincoln	1	56
Perth	1	25
Simcoe North	1	60
Fort William	1	20
Port Arthur	1	30
Welland	1	25
Wentworth	1	55
York	1	50
Totals	23	1,365

COUNTY EXHIBITS AT THE CANADIAN NATIONAL EXHIBITION

As an advertising project for their county, many Agricultural Representatives, in co-operation with their county councils, staged exhibits at the Canadian National Exhibition, presenting to the public industries and products for which their counties are noted. The following counties had exhibits in 1929: Norfolk, Hastings, Peel, Kent, Simcoe, Northumberland and Durham, Lambton, Grey, Brant, Essex, York, and two exhibits from Northern Ontario, one representing Northwestern Ontario, and the other districts east of and including Algoma.

The results of these exhibits may be shown by the following extract from the report of the Representative for Rainy River District, which emphasizes their far-reaching effects:

> "The North-Western exhibit, gathered from the three districts, Thunder Bay, Kenora and Rainy River, proved to be one that attracted much attention. Several letters from Old Ontario have been received from men who were interested in the exhibits, especially the attractive display of forest, sheep and farm products. The words 'The Land of Promise and Fulfilment' seemed to attract much attention from many people not knowing the possibilities of the district."

JUNIOR DEVELOPMENT

RURAL SCHOOL FAIRS

For twenty years Rural School Fairs have continued to increase in number and popularity. The figures from the Dufferin County report indicate the progress that has been made:

Year	No. of Schools	No. of pupils	No. of plots	No. of entries at Fair	Entries per pupil Dufferin	Entries per pupil Province
1914	42	720	560	1,775	....	....
1915	69	1,081	1,064	2,110	....	....
1916	70	1,128	1,183	1,437	....	....
1917	71	1,104	1,407	1,732	....	....
1918	70	1,099	1,118	1,557	....	....
1919	70	1,098	1,204	2,129	....	....
1920	71	1,163	1,339	2,068	....	....
1921	69	1,208	1,478	1,984	1.6	2.0
1922	69	1,287	1,576	2,314	1.8	2.0
1923	67	1,429	1,720	2,162	1.5	1.9
1924	67	1,254	1,829	2,215	1.77	1.75
1925	69	1,284	1,873	2,005	2.26	2.16
1926	74	1,365	1,945	2,953	2.16	2.04
1927	82	1,483	2,127	5,296	3.6	2.2
1928	84	1,340	2,018	6,298	4.6	2.35
1929	87	1,468	2,153	5,802	4.0	....

The supplying of material to the pupils was slightly altered in 1929, in that eggs and potatoes are no longer distributed, the purpose in omitting these from the list of supplies being to reduce the cost of distribution and to include only seeds that could be delivered economically by mail. Entries of potatoes and poultry from the home farm and flock were encouraged and in practically all instances, larger and better quality exhibits were shown.

Each year a number of new educational features were added, such as:

Showmanship Competition.
Knot-Tying Competition.
Spelling Match.
Story-Telling.
Folk Dances.

To the champion pupil at each School Fair, the T. Eaton Co., Limited, donated a silver trophy. In all 566 trophies were distributed in 1929. In addition they also donated copies of "Three Centuries of Canadian Story" and

"Famous Canadian Stories" to the second and third high pupils at each fair respectively. This action on the part of the T. Eaton Co., Limited was very much appreciated by the boys and girls taking part in School Fairs and has been a factor in making the fairs a success.

SCHOOL FAIR STATISTICS, 1929

County	No. Fairs	No. Schools	No. Pupils	Entries	Attendance		Championship	
					Children	Adults	Entries	No.
Algoma	12	57	1,801	5,002	1,880	2,025	....	......
Brant	8	60	1,663	3,729	2,200	1,490	727	1
Bruce	16	147	2,842	9,722	4,075	8,175	14	1
Carleton	11	95	2,253	5,107	3,025	4,300	415	1
Cochrane	12	44	1,125	2,015	885	1,055	....	......
Dufferin	8	87	1,468	5,802	1,955	2,310	265	1
Dundas	9	102	2,713	4,028	3,210	7,225	....	......
Durham	12	91	1,802	5,498	2,720	4,140	113	1
Elgin	13	137	2,854	7,236	3,280	3,665	....	......
Essex	14	112	3,755	7,402	3,125	2,950	....	......
Frontenac	11	119	2,143	4,270	4,150	3,100	....	......
Glengarry	9	124	5,456	2,851	2,125	1,800	....	......
Grenville	8	77	1,386	3,826	1,850	2,000	....	......
Grey	19	224	5,845	8,991	5,625	12,100	1,358	1
Haldimand	7	88	2,068	5,938	2,600	3,075	....	......
Halton	7	47	1,322	3,568	1,650	5,225	....	......
Hastings	10	112	2,437	4,234	2,725	2,500	629	1
Huron	16	141	3,021	11,408	5,850	6,750	....	......
Kenora	14	41	1,679	4,287	2,410	1,970	841	1
Kent	14	162	4,200	11,912	4,337	3,875	....	......
Lambton	13	153	3,338	10,109	3,850	8,750	....	......
Lanark	9	94	1,661	5,080	2,125	4,350	....	......
Leeds	12	135	4,267	7,475	3,875	4,250	....	......
Lennox and Addington	10	97	3,188	3,081	1,820	2,835	....	......
Lincoln	9	47	1,848	6,573	2,275	2,950	1,095	1
Manitoulin	14	67	1,654	4,046	2,190	2,300	333	2
Middlesex	12	112	3,295	8,949	4,395	8,060	....	......
Muskoka and Parry Sound	26	193	4,571	18,770	5,125	9,900	....	......
Norfolk	8	108	2,360	5,407	2,100	4,100	752	1
Northumberland	9	98	2,113	4,591	3,275	6,550	327	1
Ontario	17	149	3,821	10,996	5,825	7,600	....	......
Oxford	10	106	3,406	9,305	5,350	4,550	1,290	1
Peel	6	68	2,657	4,847	4,950	3,650	....	......
Perth	6	58	1,454	9,160	1,680	2,075	....	......
Peterborough	9	72	2,100	4,420	2,125	3,350	957	1
Prescott and Russell	9	65	2,009	3,353	2,775	3,175	....	......
Prince Edward	8	71	1,690	3,930	2,125	2,375	....	......
Rainy River	13	59	4,985	5,333	2,950	1,990	675	2
Renfrew	14	93	2,360	7,170	3,450	3,325	581	1
Simcoe North	10	97	2,420	6,401	2,944	3,335	....	......
Simcoe South	8	98	2,395	5,393	2,625	2,150	....	......
Sudbury	10	78	2,312	4,687	3,025	1,005	....	......
Temiskaming	13	34	785	3,393	1,069	785	820	1
Fort William	10	32	826	3,008	1,000	720	....	......
Port Arthur	9	43	1,100	2,830	1,120	1,430	....	......
Victoria	15	100	2,354	5,372	3,315	3,347	....	......
Waterloo	7	73	2,886	4,153	2,500	4,200	....	......
Welland	9	68	3,790	5,220	2,250	2,025	911	1
Wellington	12	109	2,344	6,577	3,325	3,300	....	......
Wentworth	8	65	2,485	5,313	4,400	3,165	858	1
York	11	122	4,160	8,413	3,850	8,150	....	......
Totals	566	4,831	137,467	310,181	153,360	199,477	12,691	21

CHAMPIONSHIP SCHOOL FAIRS

Keen interest is displayed by the pupils when competing for county honours. As a further stimulus Championship School Fairs were held in nineteen counties during the past year, and many outstanding entries were exhibited, for example; a sample of peas which was exhibited at the Grey County Championship School Fair was later shown at the Royal Winter Fair and the International Hay and Grain Show at Chicago, and was of sufficiently high standard to win third and second prizes, respectively.

The opinion of the Oxford Representative, quoted below, is interesting to note:

> "The Championship School Fair is considered a very important part of our School Fair work. The number of entries in the regular classes and the large number taking part in the Stock Judging, First Aid and Public Speaking Competitions indicate the success of the event."

Entries in Special Classes at Championship Fair:

Senior Stock Judging	6	teams
Junior Stock Judging	15	"
First Aid	17	"
Public Speaking	15	"
Recitation	12	"
Impromptu Speech	6	"
Poultry Judging	10	"

HOME GARDEN CONTESTS

The Home Garden Contest is a competition in which eighteen varieties of seed are distributed to boys and girls between the ages of twelve and seventeen, for the reasonable price of fifty cents. During the growing season these gardens are inspected and prizes awarded to the contestants having the best all-round gardens. These are competitions of the first order and much good is done through them. They are the avenue through which many good vegetables are introduced to the farmers' gardens, and very often supply the vegetables for the home table, which would be scarce articles if the boys and girls had not interested themselves in this competition. Many boys and girls make this a money-making proposition and Merle Charlton of Charlton, at the time of the School Fair stated that she had disposed of $15.00 worth of vegetables from her garden.

BOYS' AND GIRLS' CLUB WORK

Boys' and Girls' Club Work in Ontario has made rapid strides during the past year, fifty new clubs having formed. They serve as a link in helping hold the interest of the boys and girls from the time they pass from School Fair age to the Junior Farmer or Junior Institute period. In co-operation with the Ontario and Federal Live Stock Branches, Heifer, Sheep and Pig Clubs were formed. Service Clubs have also played an important part in fostering Potato and Seed Grain Clubs. The Representative for York County makes the following statement regarding the Kiwanis Boys' Potato Club:

> "Ninety per cent. of the boys saved their crop for seed for 1930. This demonstrates the result of distribution of certified Dooley Seed. The boys were taught by experiment the proper value of fertilizer on the potato crop. They learned the proper type to select through showing at the Potato Fair. They made a connection with Toronto Kiwanians, thus more closely welding the feeling between country and town."

BOYS' AND GIRLS' CLUBS ORGANIZED DURING 1929

County	Name of Club	Membership
Cochrane	Moonbeam Sheep Club	19
	Blackmeyer Sheep Club	22
Dufferin	Orangeville Board of Trade Boys' Potato Club	31
Durham	Manvers Potato Club	12
	Inter-County Pig Club	5
Essex	Dent Corn Club	55
	Soy Bean Club	23
Glengarry	Lochiel Junior Farmers' Sheep Club	10
Grey	Grey Boys' Sheep Club	69
	Kiwanis Boys' Potato Club	67
Haldimand	Cayuga Sheep Club	10
	Dunnville Sheep Club	14
Huron	Turnberry Sheep Club	14
Kenora	Boys' Potato Club	14
	Dryden Sheep Club	36
	Quibal Sheep Club	14
	Oxdrift Garment Club	12
	Eagle Sheep Club	18
	Minnitake Sheep Club	14
Kent	Kent Dent Corn Competition	190
Lambton	Forest Sheep Club	16
	Petrolia Sheep Club	15
	Eddy's Mills Sheep Club	18
Lennox and Addington	Boys' Oats and Barley Club	34
Ontario	Junior Kiwanis Potato Club	48
	Senior Kiwanis Potato Club	27
	Boys' and Girls' Scugog Leicester Sheep Club	12
Perth	Rannock Sheep Club	13
Peterborough	Peterborough Holstein Heifer Club	11
	Inter-County Pig Club	5
Prince Edward	Picton Kiwanis Boys' Potato Club	48
Rainy River	Demonstration Flock Sheep Clubs (4)	47
Simcoe North	Barrie Boys' and Girls' Ayrshire Cattle Club	18
	Oro Sheep Club	30
	Carley Sheep Club	
	Phelpston Sheep Club	
Sudbury	Sudbury Board of Trade Farm Boys' Potato Club	50
Temiskaming	New Liskeard Boys' Potato Club	35
Fort William	Fort William Young Men's Board of Trade Potato Club	27
Port Arthur	Rotary Potato Club	19
Victoria	Victoria County Weed Scouts	...
Welland	Wainfleet Sheep Club	11
Wellington	Bellwood Sheep Club	12
Wentworth	Boys' Chamber of Commerce Potato Club	56
	Wentworth Holstein Heifer Club	14
	Wentworth Ayrshire Heifer Club	10
York	Kiwanis Boys' Potato Club	25
	Total Number of Clubs	50
	Membership	1,250

JUNIOR FARMER CONFERENCES

The exchanging of ideas is always welcome to those who are endeavouring to improve the community life of their district. To provide for this four zone conferences for Junior Farmers were held in 1929. They were held at Kemptville, Guelph, Cobourg and London and the increased attendance and keener interest manifested indicated that these conferences are becoming more popular. The Junior Farmer of Ontario is taking a keen interest in all problems affecting agriculture and especially from an economic standpoint. A copy of the London programme is given below:

JUNIOR FARMER CONFERENCE

London Life Assurance Company Building, London

Friday, December 13th, 1929

General Chairman—Albert Wellwood, Kent County.

10.00 a.m.—Call to order—Chairman's remarks.
10.15 a.m.—Introductory Address, by J. E. Whitelock, Assistant Director, Agricultural Representative Branch, Toronto.
10.35 a.m.—The Progress of Junior Farmer Work in Middlesex County—Charles Brumwell, Middlesex County.
10.50 a.m.—Discussion.
10.55 a.m.—Our Experience in Programme Planning—Alfred Geddes, Kent County; Clarence Munroe, Middlesex County.
11.25 a.m.—Discussion.
11.30 a.m.—Lessons from 1929 4-H Club Leader Training School, Springfield, Massachusetts. Wm. Galbraith, Elgin County.
11.50 a.m.—Discussion.
12.15 noon—Luncheon—Chairman, Edwin Chesney, Huron County. Special Speaker—W. R. Reek, Director, Experimental Farm, Ridgetown.
1.45 p.m.—Reconvene—My Experience with Farm Accounts—Robt. Archibald, Huron County.
1.55 p.m.—Discussion.
2.00 p.m.—Is A Club Paper Worth While?—Stuart Tuckey, Middlesex County.
2.20 p.m.—Discussion.
2.25 p.m.—Can Economic Problems be Attacked by Junior Farmers as Individuals or as Organizations—Hugh Carroll, Elgin County.
2.45 p.m.—Discussion.
3.00 p.m.—How We Organized Our Musical Festival—D. C. Turner, Elgin County.
3.15 p.m.—Discussion.
3.20 p.m.—Some Activities of Junior Farmer Work in Oxford County—Joel Leslie, Oxford County.
3.30 p.m.—Discussion.
3.35 p.m.—Our Experience in Financing Junior Activities—Murray Allin, Middlesex County.
3.50 p.m.—Discussion.
4.00 p.m.—Resolutions.
4.30 p.m.—Adjourn.

Junior Farmer Associations

Junior Farmer Associations continue to play an important part in the moulding of community life, and offer an excellent medium through which young people may fit themselves for farm life and community leadership. In the majority of counties the Junior Farmer Association is looked upon as the most beneficial and educational organization in the county. They bring together young men and women from different parts of the county; from different denominations; and from different environments. Such bringing together of young people cannot help but broaden the vision and create a greater understanding among rural people. Some idea of the activities of the Junior Farmers can be gathered from the accomplishments of the Glengarry Association:

"1. Paid expenses of one member for a year's course at the Kemptville Agricultural School.
2. Have re-organized the Lochiel Branch of the Ontario Plowmen's Association and held one successful plowing match.
3. Held one successful drainage demonstration to show the value of the Martin Ditcher.
4. Interested the community in Hydro development.
5. Held educational and social meetings."

Other features of Junior Development, are:

Crop and Stock Judging Contests.
Debating Leagues.
Public Speaking Contests.
Dramatic Contests.
Athletic Contests.
Musical Festivals.
Tours and Excursions.
Profit Competitions.
Training of Younger Boys in the Judging of Grain and Live Stock.

JUNIOR TRIP TO CHICAGO

As a special reward for some achievement, local organizations assist leaders to attend the Boys' and Girls' Club Congress at Chicago at the time of the International Life Stock Exposition. Many new ideas and thoughts are accumulated by the fortunate members of this party who return to their communities with a wider vision and better prepared to direct social progress.

WINNERS FREE TRIP
TO
INTERNATIONAL LIFE STOCK EXPOSITION
AND
BOYS' AND GIRLS' CLUB CONGRESS, CHICAGO, ILL., U.S.A.

NOVEMBER 29TH—DECEMBER 6TH, 1929

BOYS:

Douglas Brooks, Brantford, Brant County.
Norman Parks, Camilla, R.R. 1, Dufferin County.
Gordon Carroll, Orton, R.R. 2, Dufferin County.
Diarmid McTaggart, Appin, R.R. 4, Middlesex County.
Archie Campbell, Ilderton, R.R. 1, Middlesex County.
Robt. Brown, Wilsonville, R.R. 1, Norfolk County.
Wm. Bovaird, Brampton, R.R. 3, Peel County.
Art. McCaugherty, O.A.C., Guelph, Peel County.
Allan Corrigan, Everett, South Simcoe County.
Jack Spies, Floradale, Waterloo County.
Robert Connell, Palmerston, R.R. 3, Wellington County.
Eric Mallett, Rothsay, Wellington County.
Laverne Dyment, Dundas, Wentworth County.
Fraser Gee, Gormley, York County.

GIRLS:

Laura Clark, Cainsville, R.R. 1, Brant County.
Kathleen McKibbon, Belwood, R.R. 4, Dufferin County.
Helen Ford, Duart, Kent County.
Mildred Keown, Beamsville, Lincoln County.
Elsie Dawson, Niagara-on-the-Lake, R.R. 2, Lincoln County.
Sara Evans, Delaware, R.R. 1, Middlesex County.
Blanche Robinson, Courtland, Norfolk County.
Jean Fraser, Streetsville, R.R. 3, Peel County.
Mary Fraser, Streetsville, Peel County.
Elsie Elliott, Malton, R.R. 1, Peel County.
Florence Elliott, Malton, R.R. 1, Peel County.
Edna Connell, Beeton, South Simcoe County.
Beulah Becker, Ayr, R.R. 1, Waterloo County.
Olive Thompson, Glanford Station, R.R. 3, Wentworth County.
Mrs. L. Dyment, Dundas, Wentworth County.
Jessie Thompson, Gormley, York County.

JUNIOR INSTITUTES

To the girl on the farm the Junior Institute takes the place of the Junior Farmer Association for the boy. In a great many cases joint meetings are held. With the co-operation of the Women's Institute Branch one and two-day coaching classes have been conducted in practically all counties in Ontario. These coaching days are held in preparation for the County Home Economics Judging Competition. During the past year thirty-eight compeitions were held.

GIRLS' GARDEN AND CANNING CLUBS

In a number of counties great interest was aroused amongst the girls in a Garden and Canning Club Competition arranged for their special benefit. The award, based on eighty per cent. for garden and twenty per cent. for exhibit of canned goods, is a two weeks' course at MacDonald Institute, Guelph, with board, lodging and railway fare paid. The following girls are winners of short courses for the past year:

County	Name	Address
Dufferin	Annie Willmott	Grand Valley
	Madeline Duncan	Orton, No. 2
Haldimand	Bessie Kiefer	Caledonia, No. 3
	Annie McClung	Caledonia, No. 1
Halton	Laura Prudam	Campbellville, No. 3
Middlesex	Margaret Demaray	Strathroy, No. 5
Peel	Marian Metcalfe	Inglewood, No. 1
Rainy River	Elsie Mattoon	Burriss
	Mrs. J. Russell	Big Fork
Fort William	Kathleen Whitlock	Fort William, No. 1
	Kate Guzzel	Fort William
Port Arthur	Annie Elchuk	Murillo
	Emily Ellis	Dorion
Temiskaming	Vera Kerr	Englehart
	Lela Ohlman	Thornloe

JUNIOR FARMER HOME PLOWING COMPETITIONS

For a number of years competitions have been conducted in which junior farmers plowed a specified area of land on their home farm. Qualified judges scored the various lands and gave helpful suggestions as to how competitors might improve their plowing. These competitions have been a fruitful source of gathering new material for the county matches. This year, for the first time, the Ontario Plowmen's Association included a junior farmer class at the Provincial Plowing Match, which was open to one team of three young men from each county, the teams to be selected by the Agricultural Representative, and no contestant to be over twenty-one years of age by the first of October, the year in which the competition is held. There was an excellent response, seventeen county teams with fifty-one contestants competed. The work done by these juniors was considered to be of a very high calibre and the three highest teams were as follows:

Waterloo York Ontario

The ready response to this competition was a direct result of the Home Plowing Competitions. The following competitions were held in 1929:

County	Number of Contestants
Elgin	25
Halton	24
Kent	12
Kent	11
Leeds	9
Muskoka and Parry Sound	9
Muskoka and Parry Sound	10
Northumberland	7
Ontario	8
Perth	12
Perth	5
Peterborough	12
Rainy River	17
Temiskaming	9
Temiskaming	6
Victoria	4
York	33
	213

JUNIOR SECTION OF FALL FAIRS

Agricultural Representatives are doing a great deal to bolster up Fall Fairs in the conducting of Junior Sections. The report of the Representative foı North Simcoe very clearly outlines the organization and purpose of a Junior Section at the Fall Fairs and is as follows:

BARRIE JUNIOR FAIR

	Gate Receipts	Prize Money Paid	Entries
Barrie	$2,569 48	$1,800 45	2,191
Elmvale	1,190 30	1,102 49	1,875
Coldwater		No report	
Oro		No report	
Midland		No report	
Orillia	....	No report	

BARRIE JUNIOR FAIR

This fair, designed to provide a connecting link between the Schools Fairs and the Falls Fairs, was organized in 1928 and continued and expanded in 1929. The following is a summarized report:

Statistics	1928	1929
Number of classes	12	27
Number of competitors	27	47
Number of entries	67	227
Prize money paid	$150 00	$300 00
Winner of Championship Prize (Two weeks' course at O.A.C. offered by Ontario Department of Agriculture).	Stewart Bell, Barrie No. 3	Clifford Baldwick, Barrie No. 3

Clifford entered in eighteen classes, winning three firsts, one second, three thirds and one sixth—twelve points and $15.00 in prize money. Stewart Bell winner of the Championship Prize in 1928, while ineligible for the grand prize, entered in twenty-five classes and secured five firsts, one second, five thirds, five fourths and one seventh—21¼ points and $25.75 prize money.

SUMMARY OF THE FAIR

In the 1929 Fair there were exhibited thirty-one head of stock, forty-three entries of poultry, fifty-one entries of seed grain and sheaves, ten collections of apples, twenty pecks of Dooley potatoes and six models of farm equipment, and there were twenty-six entries in the Judging Competition.

Features of the 1929 Fair were as follows:

1. Live Stock and Seed Judging Competition.
2. Showmanship classes in connection with each live stock class.
3. Sheaves of grain and corn in addition to the grain.
4. Barrie Ayrshire Club—eighteen members.
5. Special attention was paid to the staging and displaying of exhibits.
6. The parade of the live stock of the Junior Section was considered by many to be the outstanding feature of the whole fair.
7. Educational features were stressed and kept to the foreground as much as possible.
8. A banquet was given by the Kiwanis Club to all junior exhibitors following the Fair.

Co-operating Agencies

1. Barrie Kiwanis Club.
2. Barrie Agricultural Society.
3. Ontario and Dominion Departments of Agriculture.
4. Local press.

Management

The Junior Fair was managed by the Agricultural Representative.

General Comment

The Junior Fair was successful beyond our expectations in its benefit to the juniors and also in its effect on the Senior Fair through increased number of exhibits and increased general interest.

As a direct result of this fair, the Agricultural Society has already made plans to re-organize the fair grounds and build a new cattle barn. The Kiwanis Club is also planning to build a stock barn for the Junior exhibits with a capacity for about 100 head of stock.

Profit Competitions

Profit competitions form the embryonic stage of Farm Accounting. It is necessary for a competitor to keep accurate account of costs of labour and expense incurred in growing a crop or feeding an animal. There is also a Farm Accounting Competition in which the Junior Farmer keeps detailed tab on the expenses and receipts of his home farm. The award for these competitions is a two-weeks' course at either the Ontario Agricultural College, Guelph, or the Kemptville Agricultural School with all expenses paid.

The following competitions were conducted during the past year:

Kind	Number Competitions	Number Contestants
Acre profit, Corn	1	4
Oats	3	14
Potatoes	2	10
Wheat	1	4
Baby beef	1	3
Feeding hogs for profit	1	2
Farm accounting	12	131
Totals	21	168

Acre profit competitions were held in several counties. In these competitions man labour is charged at twenty-five cents per hour and horse labour at fifteen cents per hour; fertilizer and seeds are valued at the market price, and also the product when grown. The award is based on the highest net profit per acre. In the Baby Beef Competition the award is based on seventy-five per cent. for quality and finish, twenty per cent. for the lowest cost per pound of gain, and five per cent. for the best kept records. Competitors are allowed to exhibit their animal at a number of the leading exhibitions. The basis of award in the Feeding Hogs for Profit Competition was sixty per cent. for highest net profit per hundred weight of gain, twenty per cent. for best kept records, twenty per cent. for type, conformation and finish, with two points deducted for every five points or fraction thereof under or over standard market weight at shipping point, that is, under 180 pounds or over 230 pounds (country points). The winners in these competitions were as follows:

Name of Competition	Name and Address	County
Acre profit, Corn	Carleton D. Hodgson, Wheatley	Kent
Oats	John Jacobs, Wheatley	Kent
	Clarence Stewart, Caistor Centre	Lincoln
	Cameron McTaggart, Glencoe	Middlesex
Potatoes	Bruce Bell, Wheatley	Kent
	J. E. Jarvis, Mount Albert	York
Wheat	Charles H. Hopper, Gormley No. 2	York
Baby beef	T. A. Douglas, Strathroy No. 5	Middlesex
Feeding hogs for profit	Eugene L. Arniel, Poplar	Manitoulin
Farm accounting	Alex McIntyre, Chesley	Bruce
	Harold Meek, Orangeville	Dufferin
	Milford Sherwin, Orono	Durham
	John Moon, Port Hope, R.R. 2	Durham
	Raymond Chapman, Orono	Durham
	Victor Wilson, Port Hope, R.R. 1	Durham
	Lorne J. Porter, Jarvis, R.R. 1	Haldimand
	Lawrence E. Gowan, Hagersville, R.R. 4	Haldimand
	Robt. Archibald, Seaforth, R.R. 4	Huron
	Donald McIntrye, Vineland	Lincoln
	Clarence E. Munro, Lambeth, R.R. 2	Middlesex
	Tyndale Rutherford, Brampton R.R. 5	Peel
	W. K. Petrie, Peterboro, R.R. 8	Peterboro
	Harold Dunford, Lakefield	Peterboro
	Joseph Beach, Beachburg	Renfrew
	J. C. Wright, Westmeath R.R. 2	Renfrew
	Will Elliott, Elmvale, R.R. 3	North Simcoe
	Joyce Rumney, Midland, R.R. 1	North Simcoe
	Cyril McKinney, Erin R.R. 1	Wellington

COUNTY STOCK JUDGING COMPETITION

For a number of years County judging competitions have been limited to the judging of live stock only, but in 1928 and 1929 the judging of poultry, seeds, vegetables, roots or fruit was included. The purpose in adding these extra classes was to give contestants an opportunity to become better versed in the judging of crop products, as a knowledge of these is vital to successful agriculture.

During the past year the following competitions were held:

County	Number of Competitors		Prizes
Brant	10		$10 trip to Chicago
Bruce	64		Trophies, cash
Carleton	33		$104
Dufferin	50		$80 trophies
Durham	67		$80
Elgin	22		$75 shield
Grey	43		
Haldimand	18		4 trips to R.W. Fair –4 trips, Guelph W. Fair
Halton	25		$60
Hastings	25		$28
Huron	31		$25 trophies
Kent	17		$28 trophies
Lanark	8		Trophy (miniature)
Lennox and Addington	20		$55
Lincoln	13		$26
Middlesex	49		Trophies (cash)
Norfolk	24		$59
Ontario	66		$30 Trophies
Peel	63		$199
Perth	53		$68
Peterboro	53		Trips
Prince Edward	16		Four trophies
Renfrew	34		$57 shields
Simcoe North	26		$40
Simcoe South	30		$75
Fort William	17		$40 medal, books
Port Arthur	45		$50
Victoria	45		$35
Waterloo	74		$133
Welland	64		——
Wellington	34		$ 25 trip, cups, etc.
Wentworth	65		$110
York	35		$240 trips
Number of Contestants	1,239		

INTER-COUNTY JUDGING COMPETITION

Every young man who is chosen by his Agricultural Representative to represent his county as a member of the team of three in an Inter-County Judging Competition considers himself one of the "chosen few." The competitions add impetus to the county competitions because a boy must prove his worth before being eligible to uphold the reputation of his county. Three such competitions were conducted, one at the Royal Winter Fair at Toronto, one at the Ottawa Winter Fair, and the third at the Provincial Winter Fair, Guelph. The winning teams for 1929, are as follows:

ROYAL WINTER FAIR—Prince Edward County
Members of team.......Frank Huff, Bloomfield, R.R. 1
Sherman Black, Belleville, R.R. 7
Harold Munro, Demorestville, No. 3
Coach..................F. J. Webster

GUELPH WINTER FAIR—Wentworth County (Live Stock Judging)
Members of team.......Jacob Shaver, Ancaster
Richard Biggs, Dundas
Robert Young, Alberton
Coach..................W. G. Marritt

Victoria County—Seed Judging, Oxford County (Tie)
Members of team—Wm. G. Brown, Woodville, R.R. 3 Mac Marshall, Woodstock
Grantin McKay, Glenarm Willis Matheson, Innerkip
R. J. McAlpine, Lorneville Raymond Glaves, Woodstock
Coach............M. H. Winter G. R. Green

OTTAWA WINTER FAIR—Prince Edward County (Live Stock Judging)
Members of team.......Harry Corsline, Demorestville, R.R. 2
Harmon Montgomery, Carrying Place
Bert Kotchpaw, Demorestville, R.R. 2
Coach.................F. J. Webster

Renfrew County—Seed Judging
Members of team.......Harvey Young, Arnprior, No. 3
Harold Gallagher, Douglas
Alfred Gibbons, Renfrew, R.R. 3
Coach.................A. H. Martin

The county standing and scores at the Royal, Guelph and Ottawa Winter Fairs, inter-county competitions are as follows:

INTER-COUNTY JUDGING COMPETITION, ROYAL WINTER FAIR

NOVEMBER 19TH, 1929

INTER-COUNTY SUMMARY

County	Horses	Beef cattle	Dairy cattle	Sheep	Swine	Total	County standing
Prince Edward	471	487	445	450	527	2,380	1st
Wentworth	385	502	504	474	513	2,378	2nd
Renfrew	442	445	507	465	510	2,369	3rd
Carleton	414	476	509	476	482	2,357	4th
York	437	512	469	454	467	2,339	5th
Wellington	377	468	485	465	526	2,321	6th
Dufferin	466	500	492	400	453	2,311	7th
Oxford	422	527	443	473	439	2,304	8th
Haldimand	378	512	436	475	495	2,296	9th
Middlesex	445	525	430	419	474	2,293	10th
Huron	412	463	436	498	463	2,292	11th
Perth	475	503	371	420	475	2,244	12th
Grey	338	478	468	492	454	2,230	13th
Brant	381	475	447	444	468	2,215	14th
Elgin	372	441	423	464	494	2,194	15th
Simcoe South	391	469	410	389	531	2,190	16th
Peel	405	480	410	397	492	2,184	17th
Essex	392	441	415	457	451	2,156	18th
Halton	354	507	423	407	452	2,143	19th
Bruce	384	494	354	437	454	2,123	20th
Peterborough	429	377	372	443	496	2,117	21st
Kent	352	427	390	462	485	2,116	22nd
Northumberland	376	470	363	425	471	2,105	23rd
Waterloo	367	426	428	396	481	2,098	24th
Durham	344	483	452	422	392	2,093	25th
Lincoln	342	476	378	444	444	2,084	26th
Ontario	383	401	391	385	512	2,072	27th
Simcoe North	357	455	352	440	457	2,061	28th
Welland	374	446	347	420	463	2,050	29th
Hastings	325	406	432	441	441	2,045	30th
Frontenac	353	392	385	465	442	2,037	31st
Lennox and Addington	334	438	359	384	466	1,981	32nd
Lambton	376	500	272	377	420	1,945	33rd
Lanark	352	447	365	339	427	1,930	34th

INTER-COUNTY JUDGING COMPETITION

ONTARIO PROVINCIAL WINTER FAIR, DECEMBER 9TH, 1929

County	Horses	Beef cattle	Dairy cattle	Sheep	Swine	Total	County standing
Wentworth	484	400	517	512	461	2,374	1st
Wellington	520	424	434	492	433	2,303	2nd
York	513	409	495	488	396	2,301	3rd
Peel	441	470	461	446	449	2,267	4th
Halton	485	452	444	428	446	2,255	5th
Dufferin	498	433	395	494	432	2,252	6th
Grey	477	414	411	467	469	2,238	7th
Oxford	468	481	424	425	406	2,204	8th
Victoria	437	471	354	442	496	2,200	9th
Haldimand	423	405	420	404	477	2,129	10th
Durham	483	458	403	399	385	2,128	11th
Kent	478	431	373	446	376	2,104	12th
South Simcoe	445	437	425	418	377	2,102	13th
Huron	439	406	365	508	383	2,101	14th
Perth	476	399	332	401	482	2,090	*15th
Waterloo	428	463	382	418	399	2,090	*15th
Bruce	470	400	334	451	414	2,069	17th
Elgin	488	372	421	452	336	2,069	17th
Middlesex	411	387	444	470	324	2,036	19th
Welland	438	386	353	396	410	1,983	20th
Ontario	486	396	376	433	278	1,969	21st
Essex	411	419	339	397	370	1,936	22nd
Lambton	455	417	328	357	378	1,935	23rd
Lincoln	451	451	355	368	290	1,915	24th

*Tie.

SEED JUDGING COMPETITION

County	Oats	Barley	Potatoes	Red Clover	Weeds and weed seeds	Total	County standing
Victoria	262	230	273	229	230	1,224	*1st
Oxford	254	252	230	243	245	1,224	*1st
Middlesex	237	255	244	242	225	1,203	3rd
Grey	259	231	241	229	230	1,190	4th
York	242	240	246	224	230	1,182	5th
Kent	281	230	266	211	185	1,173	6th
South Simcoe	270	259	253	208	175	1,165	7th
Perth	222	244	247	255	195	1,163	8th
Wellington	277	225	275	215	165	1,157	9th
Dufferin	202	237	265	250	200	1,154	10th
Waterloo	214	211	272	224	205	1,126	11th
Welland	238	213	237	211	220	1,119	12th
Huron	215	248	214	214	225	1,116	13th
Essex	256	256	219	237	145	1,113	14th
Lincoln	241	254	241	230	120	1,086	15th
Durham	261	217	264	217	115	1,074	16th
Haldimand	251	212	263	233	95	1,054	17th
Halton	246	220	247	233	95	1,041	18th
Elgin	227	227	241	235	80	1,010	19th
Peel	125	194	220	190	160	889	20th

*Tie.

INTER-COUNTY JUDGING COMPETITION

Ottawa Winter Fair, December 3rd and 4th, 1929

Live Stock Judging Competition

County	Horses	Beef	Dairy	Sheep	Swine	Total	County standing
Prince Edward	482	486	510	449	421	2,348	1st
Carleton	457	530	427	476	452	2,342	2nd
Dundas	510	500	484	439	373	2,306	3rd
Grenville	490	431	506	486	345	2,258	4th
Renfrew	498	507	343	449	343	2,230	5th
Northumberland	467	449	424	444	437	2,221	6th
Lennox and Addington	468	390	482	437	399	2,176	7th
Peterborough	471	457	459	387	366	2,140	8th
Hastings	382	445	449	405	434	2,115	9th
Leeds	459	410	464	405	347	2,085	10th
Frontenac	445	427	474	348	371	2,065	11th
Glengarry	452	434	424	348	405	2,063	12th
Prescott and Russell	417	417	441	372	411	2,058	13th

INTER-COUNTY JUDGING COMPETITION

Ontario Provincial Winter Fair, December 9th, 1929

Seed Judging Competition

County	Oats	Potatoes	Barley	Weeds and weed seeds	Red Clover	Total	County standing
Renfrew	205	217	222	278	269	1,191	1st
Prince Edward	191	220	254	239	255	1,159	2nd
Carleton	165	225	208	266	245	1,109	3rd
Northumberland	190	175	257	198	267	1,087	4th
Leeds	156	180	234	189	267	1,026	5th
Peterborough	176	198	198	186	247	1,005	6th
Lennox and Addington	130	187	286	149	237	989	7th
Prescott and Russell	213	163	145	182	236	939	8th
Hastings	124	192	208	161	243	928	9th
Dundas	148	183	170	177	211	889	10th

Individual Judging Competitions

The granting of prizes for individual judging competitions at the Central Canada, the Canadian National and the Peterboro Exhibitions, and the Western Fair, is greatly appreciated by this Department, and competition amongst the young men in Ontario is very keen. The number of contestants as shown in the statistics below verifies this statement:

Name and date	Classes	Total contestants
Canadian National Exhibition, September 4th and 5th, 1929	Heavy Horses	52
	Beef Cattle	83
	Dairy Cattle	110
	Sheep	39
	Swine	63
	Poultry	26
	Roots and Grain	77
	Fruit and Vegetables	27
Central Canada Exhibition, August 19th, 1929	Heavy Horses	56
	Beef Cattle	47
	Dairy Cattle	91
	Sheep	25
	Swine	39
Western Fair, September 10th, 1929	Heavy Horses	22
	Beef Cattle	33
	Dairy Cattle	38
	Sheep	25
	Swine	33
Peterborough Industrial Exhibition, September 11th, 1929	Heavy Horses	31
	Beef Cattle	65
	Dairy Cattle	63
	Sheep	27
	Swine	51

At the conclusion of the judging competitions the Canadian National and Central Canada Exhibitions very graciously entertained the contestants to a dinner and evening performance before the grand stand.

Girls' Household Science Judging Competitions

The Agricultural Representatives assist the Women's Institute Branch in securing entries and in selecting teams of three girls to represent their counties in the Inter-County Household Science Judging Competition at the Canadian National Exhibition, and Central Canada Exhibition. Previous to the competitions they also assisted in conducting at different points training schools for girls who wish to compete. An individual competition for girls is also held at both these fairs and also at the Western Fair and the Peterboro Exhibiton. These competitions in the past have been keenly contested and add zest to the educational work in connection with household science.

THE ROYAL FIVE HUNDRED

For the third year the Junior Farmer Trip to Toronto has been participated in by approximately 500 young men, as guests of the Ontario Department of Agriculture, at the time of the Royal Agricultural Winter Fair. Judging competitions are conducted in every county or district in Ontario and ten boys from each county in old Ontario and five from each district in New Ontario are selected as members of this party. The boys in these competitions must be between the ages of sixteen and twenty-one, with the exception of the districts in New Ontario, where the age limit was extended to twenty-three years. The trip is adding a real stimulus to agricultural development among the young men who have passed the school fair age.

The comments of the following Representatives tell their own story.

Agricultural Representative, Temiskaming District:

"The Royal Judging Competition was quite a decided success this year. The majority of the boys took a real interest in the work and made splendid scores. The boys who won and will represent the District are mostly boys who have taken a real interest in School Fair activities in the past, and it is a fact that the lessons learned in School Fair work were a major factor to them in the competition."

Agricultural Representative, Carleton County:

"This Competition is of wonderful assistance in bringing out new material for junior work. Twenty-nine of the thirty-seven contestants taking part for the first time."

Agricultural Representative, North Simcoe County:

"The 'Royal' Competition and 'Trip,' coupled with the Junior Fair have been the chief stimulating influences from the Department's viewpoint, in North Simcoe. We are following with keen interest the progress of the members of each 'Royal' party sent from North Simcoe and can already state that this venture on the part of the Department of Agriculture has been the starting point in many of the young men's lives towards a greater and wider interest in agriculture and citizenship."

The programme for the "500 Party" for 1929, is given below:

TUESDAY, NOVEMBER 19TH—REGISTRATION DAY

In charge of J. E. Whitelock and M. C. McPhail, Assistant Directors, Agricultural Representative Branch.

Members of the party will be lodged in the Royal York Hotel, Front Street, across from the Union Station. Boys must register between the hours of 7.00 a.m. and 6.30 p.m.

12.45—5.30 p.m.—Tour of the United Farmers' Co-operative Plant, Duke and George Streets.
6.45 p.m.—Leave Royal York Hotel on special street cars for Hart House.
7.30 p.m.—Dinner, Hart House, University of Toronto, Guests of the Ontario Government.
Chairman: W. Bert Roadhouse, Deputy Minister of Agriculture.
Addresses by:
Hon. G. Howard Ferguson, Prime Minister of Ontario.
Hon. Geo. S. Henry, Minister of Highways.
Hon. Dr. H. J. Cody, Chairman Board of Governors, University of Toronto.

WEDNESDAY, NOVEMBER 20TH

7.00 a.m.—Breakfast, Banquet Hall,Convention Floor, Royal York Hotel.
8.20 a.m.—Leave Royal York Hotel on special street cars for Union Stock Yards, West Toronto.
9.00 a.m.—12.00 noon—Tours of Union Stock Yards and Packing Plants.
12.00 noon—1.30 p.m.—Luncheon, guests of the Industrial and Development Council of Canadian Meat Packers.
1.45 p.m.—Leave Packing Plants on special street cars for the Massey-Harris Company, Limited, manufacturers of Farm Implements, corner of King Street and Strachan Avenue.
2.30 p.m.—5.00 p.m.—Tour of plant of Massey-Harris Company, Limited.
5.15 p.m.—Cafeteria Supper, guests of the Massey-Harris Company, Limited.
6.30 p.m.—Group Singing.
7.15 p.m.—Leave for Royal Winter Fair.
8.00 p.m.—Guests of the Royal Winter Fair for the Horse Show and Performance in the Coliseum Arena.
11.00 p.m.—Leave Royal Winter Fair on special street cars for Royal York Hotel.

THURSDAY, NOVEMBER 21ST

7.00 a.m.—Breakfast, Banquet Hall, Convention Floor, Royal York Hotel.
8.15 a.m.—Leave Royal York Hotel for tour of Mail Order Department of the T. Eaton Co., Limited.
10.00 a.m.—Leave by special street cars for the Royal Winter Fair.
10.30 a.m.—Inspection of exhibits and studying the judging of live stock in the arenas.

11.30 a.m.—Luncheon, Coles Restaurant, Royal Winter Fair.
5.30 p.m.—Assemble outisde Main Entrance, Live Stock Building, beside street car loading platform.
5.45 p.m.—Leave Royal Winter Fair by special street cars for the King Edward Hotel.
6.30 p.m.—Banquet—Crystal Ball Room, King Edward Hotel, guests of the T. Eaton Co., Limited.

FRIDAY, NOVEMBER 22ND

7.00 a.m.—Breakfast, Banquet Hall, Convention Floor, Royal York Hotel.
8.00 a.m.—Leave Royal York Hotel on special street cars for tour of Parliament Buildings.
9.00 a.m.—Taking of group photograph.
9.15 a.m.—Leave Parliament Buildings by special motor for a drive around the city as guests of the City of Toronto.
11.00 a.m.—Inspection of Exhibits, Royal Winter Fiar.
11.30 a.m.—Luncheon, Coles Restaurant, Royal Winter Fair.
5.00 p.m.—Dinner, Coles Restaurant, Royal Winter Fair.
11.00 p.m.—Leave Royal Winter Fiar by special street cars for the Royal York Hotel.

SATURDAY, NOVEMBER 23RD

7.00 a.m.—Breakfast, Banquet Hall, Convention Floor, Royal York Hotel. The party will disband.

ESSAY CONTEST

Each boy participating in the trip was asked to take notes to assist him in preparing an essay on the more important phases of the trip. In each county and district book prizes were awarded to the writers of the three best essays. The winning essays from each county and district were collected and the writers of the ten most outstanding were awarded a Two-Weeks' Short Course at either the Ontario Agricultural College or the Kemptville Agricultural School, with transportation, board and lodging defrayed by the Ontario Department of Agriculture. The book prizes offered were also donated by the Ontario Department of Agriculture.

The names of the winners of short courses are as follows:

County	Name and Address
Bruce	Eddie Howe, Paisley.
Durham	Jos. Barnard, Bailieboro.
Essex	Raymond Pollard, Harrow R. R. 4.
Grey	Bob McDonald, Dundalk.
Leeds	Harold Polle, Mallorytown, R.R. 4.
Lennox and Addington	Wilkie Seeley, Bath, R.R. 2.
North Simcoe	George Buie, Stayner, R. R. 3.
Wellington	Archie Reid, Drayton.
Wentworth	Gordon Berry, Glanford Station.
York	Leonard Harmon, King R.R. 3.

In reading over the essays it was quite apparent that the boys obtained a new conception of the farming occupation and practically all return home with a feeling of great respect for the farm and the advantages that rural life offers.

T. Eaton Co., Limited Scholarship.

The T. Eaton Co., Limited has generously donated scholarships to fifteen members of the 1929 "500 Party." These scholarships are valued at $100, to be used in defraying expenses in attending a regular course at the Ontario Agricultural College. In the awarding of the scholarships the Province was divided into four zones, Northern Ontario, Western Ontario, Central Ontario and Eastern Ontario, and the award based on an examination paper set by the Department of Agriculture, covering the main features of the trip and a brief outline of the contestants' plans for the future. As a further inducement the registration fees of the first two years will be refunded to the winners:

County	Name and Address of Winners
Algoma	Lewis Tuckett, Bar River.
Carleton	Gordon B. Henry, City View.
Dundas	Maxwell Thom, Morrisburg.
Glengarry	Donald J. McPhail, Harrison's Corners.
Haldimand	Arthur E. Harvey, Hagersville, R.R. 1.
Huron	W. J. Turnbull, Ethel, R.R. 1.
Muskoka and Parry Sound	Everett Pink, Burk's Falls.
Northumberland	W. McKague, Castleton.
Oxford	Frederick Stock, Tavistock, R.R. 1.
Peel	Jack See, Malton, R.R. 4.
Prince Edward	Carl P. Reid, Demorestville.
Fort William	James Maley, Slate River.
Waterloo	Herbert Markle, Hespeler, R.R. 1.
Wellington	Douglas Reid, Drayton.
York	Alvin S. Wideman, Markham, R.R. 2.

Month's Courses in Agriculture and Home Economics.

At the present time there is a great demand among the young people in the rural districts for increased knowledge. Each year courses in Agriculture and Home Economics are conducted in a large number of counties and are, generally speaking, well attended. These courses are staged especially for the younger people of the section, but a great many older people take advantage of them as well. Every year new problems arise and through the medium of short courses information may be imparted which will be of inestimable value to the community. Not only is very considerable benefit derived from the information given, but these courses do a great deal to weld together the young people in the community. At the conclusion of the course they are usually organized into Junior Farmer and Junior Institute Associations.

MONTH'S COURSES IN AGRICULTURE

County	Place	Date	No. on Roll	Average attendance
Carleton	Manotick	Jan. 7–Feb. 1	45	32
Dufferin	Dundalk	Jan. 7–Feb. 1	13	8
Dundas	Berwick	Feb. 4–Mar. 1	20	16
Durham	Millbrook	Jan. 7–Feb. 1	43	31
Elgin	Fingal	Jan. 7–Feb. 1	30	24
Elgin	Aylmer	Feb. 4–Mar. 1	48	35
Essex	Harrow	Jan. 7–Feb. 1	12	10
Frontenac	Fermoy	Feb. 4–Mar. 1	57	31
Glengarry	Greenfield	Feb. 4–Mar. 1	125	45
Grey	Mt. Forest	Jan. 7–Feb. 1	37	23
Grey	Clarksburg	Feb. 4–Mar. 1	17	12
Halton	Palermo	Jan. 7–Feb. 1	28	22
Hastings	Plainfield	Feb. 4–Mar. 1	17	15
Huron	Wingham	Jan. 7–Feb. 1	16	13
Kent	Tupperville	Jan. 8–Feb. 1	85	45
Lambton	Oil Springs	Jan. 7–Feb. 7	27	21
Lanark	Maberly	Feb. 4–Mar. 1	14	12
Leeds	Addison	Feb. 5–Mar. 1	16	15
Lennox and Addington	Newburgh	Feb. 4–Mar. 1	11	9
Middlesex	Harrietsville	Jan. 7–Feb. 1	33	14
Middlesex	Parkhill	Feb. 4–Mar. 1	62	30
Northumberland	Campbellford	Feb. 4–Mar. 1	36	36
Ontario	Beaverton	Jan. 14–Feb. 1	30	10
Oxford	Ingersoll	Feb. 4–Mar. 1	20	18

Month's Courses in Agriculture—Continued

County	Place	Date	No. on Roll	Average attendance
Perth	Staffa	Jan. 7–Feb. 1	35	22
Peterborough	Havelock	Feb. 4–Mar. 1	24	18
Prince Edward	Milford	Jan. 8–Feb. 1	20	15
Renfrew	Arnprior	Feb. 4–Mar. 1	46	30
North Simcoe	Minesing	Jan. 7–Feb. 1	31	22
South Simcoe	Cookstown	Jan. 7–Feb. 1	60	48
Victoria	Fenelon Falls	Jan. 21–Feb.15	30	19
Wellington	Mount Forest	(Joint with Grey)	..	..
York	Unionville	Jan. 7–Feb. 1	54	44
Totals—32 Courses			1.142	745
Average			36	23

Three Months' Courses.

There is a feeling in a number of counties that the one month's course does not include as thorough and comprehensive a study of technical subjects as should be given. Therefore, three months' courses are available, to a limited number of counties each year. These courses cover many subjects not dealt with in the one month's course, such as: Mathematics, English and Music. The following table gives the number and attendance:

County	Place	Agriculture		Home Economics	
		Number on roll	Average attendance	Number on roll	Average attendance
Bruce	Walkerton	43	24	62	41
Lincoln and Welland	Stamford	34	22	33	17
Norfolk	Courtland	24	15	33	27
Peel	Cheltenham	28	13	33	18
Waterloo	Ayr	22	17	23	18
Wentworth	Waterdown	28	20	39	26
Total		179	111	223	147
Average		30	19	37	26

An itinerant staff of lecturers and demonstrators is supplied under a joint arrangement between the Agricultural Representative and Institute Branches.

Farm Mechanics Courses.

With the advent of tractors and automobiles in agriculture there has been a demand for more information in connection with their operation and care. To meet this requirement a number of one week's courses in Farm Mechanics have been inaugurated. These have been very popular and have included lectures and demonstrations on farm implements, electricity, soldering, rope slicing, paints, tools, tractors and rural sanitation. There has always been a greater demand for courses than could be met. As an indication that they are appreciated we quote the following figures:

County	Where held	Dates	Number on roll	Average attendance
Bruce	Reid's Corners	April 1–5	30	25
Durham	Millbrook	Feb. 18–22	90	70
Essex	Comber	Jan. 28–Feb. 1	78	60
Glengarry	Alexandria	Dec. 3–7	15	10
Grey	Clarksburg	Mar. 25–29	21	17
Haldimand	Caledonia	Jan. 7–11	28	18
Kent	Wheatley	Feb. 4–8	100	72
Lambton	Forest	Feb. 25–Mar. 1	96	78
Lanark	Pakenham	Dec. 10–14	40	29
Northumberland	Castleton	Jan. 14–18	23	21
Ontario	Greenbank	Mar. 11–15	56	30
Perth	Rostock	Mar. 4– 8	40	35
Peterborough	Keene	Jan. 21—25	125	97
Prince Edward	Wellington	Mar. 18–22	22	18
Renfrew	Renfrew	Dec. 17–21	88	70
Simcoe North	Vasey	Feb. 11–15	70	67
No. of Courses—16	Total		922	717
	Average		58	45

Special Courses.

Besides the above courses, special one-, two- and three-day and week courses have been held and such subjects as Poultry Raising, Vegetable Growing, Dairying, Stock Judging, Fertilizers and Drainage have been discussed.

Special Swine Courses at Packing Plants

Three courses on Swine Marketing were held in co-operation with the Industrial and Development Council of Canadian Meat Packers, the Canadian Swine Breeders' Association and the Provincial and Federal Departments of Agriculture. At these courses the junior farmers were given an opportunity to study hogs and become familiar with the type most suitable to produce high class products. Classes of Live Hogs and Dressed Carcasses were judged and information and practice given in the grading of live hogs.

CONFERENCES

In order that a uniform programme may be carried on throughout Ontario, the Agricultural Representatives were brought together for a four-day conference which was held at the Ontario Agricultural College, Guelph, on June 24th, 25th, 26th and 27th. Regional or Zone Conferences were also held in different centres to discuss problems affecting a certain area or district. These conferences all proved to be well worth while as they afforded an opportunity for the interchange of ideas and experiences and the discussion of new methods.

HOME DEMONSTRATION WORK, PEEL COUNTY

The following table shows, to some extent, the service which the Home Demonstrator gives to the women and girls of the County of Peel:

	1929
Office callers	1,364
Telephone calls (incoming)	1,650
Letters received	1,750
Letters sent	1,242
Circular letters sent	4,110

Bulletins given out	4,541
Meetings addressed	97
Attendance	5,793
Special Short Courses	8
Schools visited	3
Rural home visits	125
News articles written	19
New organizations	5
Half days in office	236
Miles travelled by car	6,650

The health of the home was looked after and educational talks given at the Home Economic's Course at Cheltenham; and health meetings were held during December at Brampton and Caledon, and during March at Port Credit. A special health exhibit was prepared for the Port Credit Community Fair, held in September.

Junior Institutes.

The summarized statement presented at the last annual meeting, gives a brief review of the present situation:

Group	Membership paid	Meetings	Addresses	Attendance	Receipts	Expenditure
County	(all branches)	7	10	248	$382 67	$311 79
Brampton	36	8	8	160	294 34	242 79
Bolton	35	7	16	387	143 73	123 21
Caledon	25	5	2	75	20 95	18 50
Cheltenham	24	3	3	91	40 50	48 78
Clarkson	15	8	6	178	20 41	......
Trinity	29	9	8	498	211 41	231 83
Tullamore	38	8	12	279	32 00	16 80
Streetsville	82	12	17	179	291 83	287 40
Total, 9	284	67	82	2,095	$1,437 84	$1,281 10

The following table of activities and attendance at each shows, to some extent, the activities of the organization:

Music festival	800
Girls' public speaking contest	100
Girls' Field Day	120
County Judging Contest	75
Banquet-Judging (Girls)	60
Judging, Canadian National Exhibition (Girls)	34
Garden Club (Girls)	25
Debating Series with Junior Farmer Association	250

The following extract from the Home Demonstrator's report shows the progress that is being made in connection with the Choral Clubs and the Music Festival:

> "The first Musical Festival was held in June, 1928, with some 125 people taking part before an audience of 400. In June 1929, we had 270 people take part in solos, duets, quartettes and choruses, with an audience which crowded the local theatre—some 700 people. In the four groups working last year, Brampton, Bolton, Trinity and Streetsville, twelve regular classes were held under the instruction of trained leaders, and two, three or four special rehearsals in preparation for the Music Festival."

* * *

Through the efforts of the Home Demonstrator many girls have been trained in conducting meetings and demonstrations. At the Girls' Session of the Central Ontario Women's Institute Convention, girls from the County of Peel, gave reports and demonstrations on Debating, Public Speaking, Music and Judging Competitions. Furthermore, one girl was chosen as presiding officer and many complimentary remarks were heard on the way in which these girls handled their responsibilities.

Seven girls were successful in winning competitions which entitled them to a short course at MacDonald Institute at Guelph.

OTHER PROJECTS CONDUCTED BY THE HOME DEMONSTRATOR

Girls' Public Speaking Contest.
Two Homecraft Courses, attendance, 276.
Coaches' Conference.
Garden Club.
Assisted at School Fairs.
Sec.-Treas. of Public School Medical Inspection Committee.
Two remodelling problems for farm water supply.
Assisted with Judging Competitions in York, Dufferin and Halton.
Other junior projects.

CROPS CO-OPERATION AND MARKETS BRANCH

Co-Operative Marketing

As there are a large number of co-operative marketing organizations in Ontario carrying on a great variety of enterprises, this Branch has many requests for assistance of different kinds. This help has been given as far as possible during the past year.

The following co-operatives have been incorporated under The Ontario Companies Act during the year:

Artemesia and Osprey Co-operative Co., Ltd., Flesherton, Ont.
The Thunder Bay Co-operative Dairy Ltd., Port Arthur, Ont.
Windsor Star Cheese Co-operative Syndicate Ltd., Navan, Ont.
Workers Trading Co-operative Ltd., Toronto, Ont.
The First Co-operative Packers of Ontario Ltd., Barrie, Ont,

Potato Marketing

Owing to the demoralized condition of the potato market, particularly during the period of consumption of the 1928 crop, special attention was given to this commodity.

Early in the winter the situation was studied and a plan evolved aiming at improvement. It was found that in spite of a surplus of home-grown poatotes in Ontario that hundreds of car loads were imported from other provinces during the winter of 1928 and 1929. Into Toronto alone 700 cars were imported. These potatoes were sold at a premium, the amount of which per bag in many cases equalled the price that Ontario farmers were offered at local shipping points.

It was found that while Ontario produced good potatoes, they were not all good. Little effective grading was being done. Ontario potatoes as a whole were not in demand and the good stocks were not branded or identified from the average run.

It was decided, therefore, that some means should be found of advising the people of the Province that good potatoes were being produced in Ontario and of organizing to offer potatoes of this kind to the trade and to the consuming public in a manner whereby they could be identified. It was clear that the plan must include production and the shipping of car lots of one variety of uniform type, free from disease, and properly graded.

Growers in producing areas were advised that the services of field men would be available if they would agree to the following conditions:

(1) That farmers work by groups of not fewer than ten members.
(2) That the group agree upon a variety which would be acceptable on the market and satisfactory to the producer.
(3) That good seed be used (certified).
(4) General cultural methods be employed for production of quality stock.
(5) That seed treatment and foliage spraying be done.
(6) That rogueing be practised.
(7) Grading to Canada No. 1 or better.
(8) Local organization for selling and shipping.

Groups were formed at the following points:

Town	County
Caledon	Peel
Orangeville	Dufferin
Shelburne	Dufferin
Alliston	Simcoe
Craighurst	Simcoe
New Lowell	Simcoe

Two field men were appointed on a part-time basis. As required these men visited the growers and assisted them with cultural problems. In addition, all fields were inspected and a report on prevalence of disease was submitted.

Several forms of publicity were used and splendid assistance was given by the press. In co-operation with the Ontario Agricultural College and Show authorities, large educational exhibits were arranged at the Canadian National Exhibition and at the Royal Winter Fair. These displays were designed to interest producers in approved methods and the "Trade" in Ontario stocks. Also to show consumers that this Province can produce good potatoes and suggest how they might procure them. These exhibits did much to bring about a change of attitude on the part of potato dealers and consumers. This year there is much more interest in and greater demand for "Ontario Grown."

In order that the production of these growers might be identified by Brand name and that there might be co-operation in publicity and in the purchase of supplies, the Central Ontario Potato Growers' Association was organized in September. All groups joined this association. The association registered a Brand name and this has been stencilled on attractive new bags in which approximately sixty-car loads of high quality potatoes have been shipped. Several of the largest retail firms in the Province have introduced this Brand of potatoes to their customers. The price has been very satisfactory. Not only has the premium for eastern stocks over Ontario been reduced but several car loads were sold at an equal price and in a few cases, a premium was paid for the Association Brand above that quoted for imported stock.

It has been necessary to break down a prejudice in many quarters against Ontario potatoes. In one instance, a wholesaler offered a car of his stock to a firm in Northern Ontario who had asked for eastern potatoes. They were finally persuaded to try a car load of these well graded Ontario tubers. When it arrived in the north, they were so pleased with the quality that they immediately wired for "another car of the same kind."

CROPS PROGRAMME

The Crops Programme for the year was varied but the main features were Better Seed and Weed Control. This Branch co-operated in sending out the Seed Train which made forty-nine stops in the Counties of Central Ontario. Speakers were provided for special meetings organized by the Agricultural Representatives to the number of 195 meetings in thirty-four counties attended by approximately 10,000 people. Better Seed was featured but all the other important phases of crop production were discussed as requested by the needs of communities. The speakers were practical and successful farmers. In order that they might be fully informed on later information and benefit by the experience of others, a two-day school or conference was held at the Ontario Agricultural College on January 3rd and 4th, 1929.

A poster entitled "Know What You Sow" was prepared and distributed in all farming areas of the Province. Daily, farm and county papers were supplied with timely articles on different phases of crop production. Several radio broadcasts were given.

By co-operation with other branches of the Department, the O.A.C. Demonstration Farms and the Federal Department of Agriculture, notable results have been attained, particularly in the matter of Better Seed. Last spring there was a much improved demand for high-class seed and many of the growers of registered seed could not supply all customers.

International Hay and Grain Show 1929

Ontario field crop growers were encouraged to exhibit at the International Hay and Grain Show held in Chicago, November 30th to December 7th, 1929. In co-operation with the O.A.C. assistance was given in preparing and shipping entries. There were forty-seven entries on which twenty-seven prizes were awarded as follows:

Field Peas, Small Yellow

R. S. Lee, Chatsworth, R.R. 2	2nd prize
Harvey Wharton, Guelph, R.R. 2	3rd prize

Field Peas, Large Yellow

H. L. Goltz, Bardsville	3rd prize

Field Beans, Navy

J. H. Lampman & Sons, Ridgetown, R.R. 1	8th prize

Field Beans, any other Variety

Peter Clark & Sons, Highgate	8th prize
J. H. Lampman & Sons, Ridgetown, R.R. 1	9th prize

Soy Beans

Hugh Jeffrey, Whitby	2nd prize
Campbell Bros., Whitby	3rd prize
James Cookson, Whitby	9th prize

Wheat (Durum)

Walter Nagel, Fisherville, R.R. 2	9th prize
H. A. Cormack, Arthur	10th prize

Barley

Landsdell Bros., Brampton, R.R. 3	10th prize
D. L. Scott, City View	12th prize
H. J. Laidlaw, Brampton, R.R. 3	15th prize

Red Clover

Araad Fitzgerald, Selkirk	2nd prize
D. N. Almas, Hagersville, Ontario	11th prize
J. H. Lampman & Sons, Ridgetown, R.R. 1	16th prize
Wm. Batten, Burgessville	17th prize
Walter Nagel, Fisherville, R.R. 2	19th prize

Alfalfa

E. G. Mehlenbacker, Fisherville	2nd prize
A. S. Snyder, Brampton, R.R. 4	4th prize
Walter Nagel, Fisherville, R.R. 2	7th prize
Paul Bacher, Cayuga, R.R. 3	9th prize

Alsike

J. S. Corner, Oxdrift, Ontario	3rd prize
Frank Kelly, Aylmer West, Ontario	4th prize

Timothy

H. J. Laidlaw, Brampton, R.R. 3	6th prize
H. L. Goltz, Bardsville	15th prize

The Ontario Government gave special prizes for highest award in following classes:

Class	Winner	Prize
Alfalfa	E. G. Mehlenbacker, Fisherville	$25 00
Alsike	Frank Kelly, Aylmer	25 00
Barley	Lansdell Bros., Brampton, R.R. 3	25 00

WEED CONTROL

As the Weed Control Act had been on the statutes since 1927, it was decided that condition warranted an effort to have greater enforcement of the provisions of the Act. In the winter and spring of 1929 a determined effort was made to have every municipality appoint an inspector. The results were very satisfactory, and we are pleased to report that practically 100 per cent. of the municipalities appointed inspectors. A large number of these men were well qualified and enthusiastic, some were indifferent, a number were entirely unsuitable. Many municipal councils planned to enforce the Act in a businesslike manner, those in another group were passive. Some when appointing inspectors instructed them to take little action, "to go easy," or to act only on receipt of complaints; a few even went so far as to advise their inspectors to "pay no attention to any complaints unless they are in writing and signed by a ratepayer."

In order to increase educational work, to solicit more support from indifferent municipalities, and to assist local inspectors, four District Weed Inspectors were appointed by the Department. One of these men covered the counties from York West, and another the organized Counties East of York. Two part-time men were appointed to work in Northern Ontario.

These men did excellent work, and the much more systematic enforcement of the Weed Act in 1929 may be attributed to their activities. Educational meetings for inspectors were held in all counties and districts in the Province. These were generally well attended, not only by weed inspectors but also by road superintendents, and members of municipal councils.

Much attention was given to publicity, by advertising in the provincial and local press, also by a large number of articles and news items. Weed Control was featured on the Better Seed Train, also at a large number of meetings organized by the Agricultural Representatives throughout the Province.

The roads of Ontario were kept in much better shape with respect to weeds in 1929 than in previous years. Those responsible for provincial highways set a splendid example. In many cases the county roads were in good shape but in some the county authorities were somewhat slack. There was a great improvement in township roads, but in some municipalities, particularly, where the reeves and members of the councils lacked enthusiasm the result was far from that desired or required by the Act.

Provincial and municipal inspectors were urged to encourage those responsible for all public property to set an example. Splendid co-operation was given by school authorities. Through the Department of Education the co-operation of public school inspectors was enlisted. County inspectors sent letters to trustee boards and results were very gratifying.

Special attention was paid to cemeteries, and there was a great improvement in all parts of the Province. Local inspectors were urged to insist on the destruction of noxious weeds in all waste places, and where destruction would not interfere with growing crops. Inspectors were encouraged to act as advisers, and show land owners how they might cultivate their fields in a manner to hold weeds in check so that they would not appear in a crop ready for harvest.

There were a few prosecutions on charges laid by local inspectors but these were in circumstances where the land occupants ignored the orders of officers and were falling far below the standards of their respective communities.

It has been found that public opinion is strongly in favour of a systematic and practical application of the Act. Farmers as a rule appreciate the enormous losses due to weeds, they also realize that these losses will increase unless aggressive measures are taken to hold in check such vicious plants as Perennial Sow Thistle. This weed was found in practically every county in Ontario, but had gained a firm foothold in only a few. Vigorous action now may save Ontario farmers millions of dollars by controlling this weed alone.

Publicity was given to the "Act respecting the Barberry Shrub, 1929." Several groups of farmers have taken advantage of this legislation and township councils have instructed their weed inspectors to have the common barberry destroyed.

Community Halls

This Branch administers the Community Halls Act of 1920. People of rural Ontario are very interested in accommodation for community activities. Very few days passed in the year without an enquiry about community halls, parks or athletic fields. Since Government assistance became available, grants have been paid to aid the establishment of eighty-one halls, nine athletic fields, and eight parks. At the close of the year a large number of projects were underway and during the fiscal year grants were paid as follows:

Name	Place	Total Cost	Grant
Burgessville Continuation School Com. Hall.....	Twp. Norwich .... Oxford County......	$5,351 34	$1,337 84
Horton Township Community Hall	Twp. of Horton, Renfrew County....	9,080 86	2,000 00
Lynden Com. Hall in the Consolidated School...	Lynden, Beverley Twp.,WentworthCo.	2,200 00	500 00
Mount Albert Community Hall................	Twp. Gwillimbury, York County......	7,806 52	1,951 63
Payne's Mills Community Hall................	Twp. Southwold, Elgin County............	4,656 95	1,164 24

COLONIZATION AND IMMIGRATION

From the following figures it will be seen that the Bureau of Colonization has had an exceptionally busy year:

Number of Farm Laborers placed		4,340
Classification—		
British Ministry of Labour Trainees	1,722	
Other than Trainees	2,121	
Wives	155	
Children	342	

Domestics:

Number that passed through Canadian Women's Hostel, 72 Carlton Street	2,194
New arrivals from British Isles	1,902
(Of this number British Domestic Trainees totalled, 108)	

Meals served	26,139	(3,403 in excess of 1928)
Beds supplied	8,615	(719 in excess of 1928)
Letters received	21,710	(6,039 in excess of 1928)

Salvation Army:

Summary of arrivals in the Province of Ontario.		
Domestics	334	
Youths	276	
Farmers	47	
Widows	10	
(Children accompanying)	16	
Unclassified	649	
Cost of operation of Reception and aftercare Lodges in Ontario:		
Mooreside Lodge, Smith's Falls, Ont	$7,654 77	
Clinton Lodge, Toronto	6,987 36	
Woodside Lodge, Toronto	11,888 69	
Burnside Lodge, Woodstock	10,501 01	
Millfield Lodge, London, Ont	1,862 74	
		$38,894 57

Vimy Ridge Farm, Guelph:

Boys received (Nov. 1–28 to Oct. 31–29)		510
(This makes total of 1,502 since the inception of the Vimy Ridge Scheme, May, 1926)		
Number of deaths	3	
Deported	58	
Returned to Old Country for various reasons	13	
Boys returned to Old Country paying their own fare	52	

Number of Railway Certificates issued to Settlers proceeding to Northern Ontario (consisting of 375 adults and 67 children)	320
Amount received from immigrants in repayment of assisted passages	$883 84
Amount held "In Trust" for boys under Vimy Ridge Scheme (Total collections—May, 1926 to Oct. 31, 1929, $68,611.89)	

There was a heavy demand for farm help throughout the year and the placements totalled 1,106 above the previous year. Only a very small percentage proved unsatisfactory. The Boy Scheme also showed an increase, bringing the total number of boys placed under this scheme since its inception up to 1,502. Out of this only 126 or 8.38 per cent. have been returned to the old country. If, from the number of returns there was deducted the number who failed on account of ill health or some other such unavoidable reason, the percentage of failures would be very small indeed.

New London Office

Ever since the Province of Ontario opened an office in London, England, it has been located at 163 Strand. The building was a narrow structure and the accommodation inadequate but the location was exceptionally good. More people pass along this famous thoroughfare than possibly any other street in the world. Under these circumstances the Province was reluctant to give up the site in order to secure larger premises. Recently, however, an opportunity presented itself to buy the freehold of 163 Strand and also the freehold of the adjoining building. The present buildings will be torn down and a new Ontario Building erected. This will give practically double the present space and it will make possible a building more in keeping with the position of Ontario among the provinces of the Dominion. The work of erection is being proceeded with and the Agent-General and staff are occupying temporary quarters across the street. It is planned to use Ontario materials in the new building as far as possible. For the exterior Queenston stone will be utilized and for the interior Ontario woods and other materials will be included. The plans under way will result in a building which will, in itself, be a more creditable advertisement of the Province and much more important still, will provide adequate accommodation for the needs of the staff and the public.

Changes in Emigration

Several changes have taken place during the past year in the conditions governing assisted emigration to Canada. For some time past and until the end of last year, approved unmarried farm workers were able to go out to Canada on paying only £2 for their ocean fare. At the beginning of the present year these terms were cancelled and a new general arrangement made by which an ocean fare of £10 is available to any British subject, irrespective of occupation, who is proceeding to Canada with the declared intention of taking up a permanent residence here. The ocean fare, in the ordinary way, third class, is about £18 15s. This change in the rate favoured the emigration of unmarried farm workers over the married farm workers with limited means. In spite of this 131 married experienced farm workers came out. Accompanying them were 518 dependants. These figures represent a considerable increase over the previous year. The following figures represent the number of different classes sent out to Ontario in recent years:

Number of New Settlers Sent Out to Ontario by the Agent-General's Office During the Years Stated

	1925	1926	1927	1928	1929
Married experienced farm workers and their wives—number of individuals	152	186	271	196	262
Children of the above	171	256	340	228	387
Single farm workers	395	706	628	560	97
Boy farm learners	6	193	428	376	510
Women household workers	229	321	382	410	674
Total	953	1,662	2,049	1,770	1,930

In addition to emigration, the Ontario Government Office sees to it that Ontario receives very general and continuous publicity. The office helps to attract business and industries to the Province. The Agent-General and his staff are very frequently a source of great comfort and convenience to visitors coming from Ontario.

AGRICULTURAL DEVELOPMENT BOARD

Following is a statement showing the business of the year as compared to previous years:

	Number of applications passed	Amount of loans passed	Value of security	Number of loans paid out	Amount paid out
1922............	458	$2,040,605 00	$4,693,403 00	334	$1,888,000 00
1923............	953	3,729,350 00	8,685,166 00	776	3,000,000 00
1924............	990	3,582,150 00	7,871,026 25	819	3,200,000 00
1925............	892	3,246,680 00	7,197,300 00	701	2,700,000 00
1926............	1,119	4,028,300 00	9,089,008 57	831	3,200,000 00
1927............	1,275	5,043,995 00	11,298,263 50	1,001	4,100,000 00
1928............	1,567	5,670,025 00	13,903,576 17	1,132	5,000,000 00
1929............	1,757	6,803,393 00	14,797,660 20	1,397	5,800,000 00
	9,011	$34,144,498 00	$77,535,304 69	6,991	$28,188,000 00

As will be seen, there was a substantial increase. The fact that the Board is becoming better known and the reluctance of other loaning agencies to loan on farm properties no doubt account for the increased demand for the services of the Board. The unfavourable crop season also no doubt had some effect on the number of applications and on collections which were slightly lower than the previous year.

From the administration standpoint the Board is on a self-sustaining basis. The business of the year showed a surplus of $111,485.99 of income over expenditure. The Board has paid over to the treasurer, $37,285.64 more than the amount expended since the inception and in addition carries forward a balance of $377,107.09. This has enabled the Board to meet its payments promptly on all bonds and debentures, while providing the necessary accommodation to those who, for various reasons, are not able to meet their payments promptly.

The Short Term Loan Associations are gradually reducing their indebtedness. The amount of loans outstanding at the end of the fiscal year was $133,999.68, which was about $10,000 less than the previous year. There are only a few associations which are really active and the balance are apparently voluntarily endeavouring to wind up their operations.

KEMPTVILLE AGRICULTURAL SCHOOL

Although the school graduated its largest class in the history of the Institution during the past year, the total attendance was not increased owing to a small registration of junior students. The Domestic Science class was also slightly below the average in numbers, and it would appear that the "Homemakers' Course" as conducted since the organization of this class, is not popular with farm girls who evidently prefer a course that will qualify them to accept employment as instructors, dietitians, etc. The time would appear to be opportune for the commencement of a two-year course in Domestic Science at this school.

As in former years, the staff of the school has been greatly in demand in extension and lecture work in the counties of Eastern Ontario.

The attendance in the regular classes was as follows:

	Number in attendance
Agriculture: Senior Year	19
Junior Year	15
Domestic Science	13
Short Courses:	
Agriculture	25
Teachers'	54

During the past year the School entertained a still greater number of visitors. The following were entertained during the year:

Name of Organization	Number in attendance (approximate)
Girls' Conference	75
Junior Farmers' Conference	75
Field Day	2,500
Trustees' and Ratepayers' Association	120
Teachers' Convention	200
Reunion ex-students	120
Picnic, Winchester	50
Women's Institute, Hawthorne	75
Creamery men, Carleton Place	20
Women's Institute, Kemptville	100
County councillors' dinner	140
Cheesemakers' Association Annual Meeting	70
Frontenac County Field Day	95
Lanark County Holstein Field Day	110
Eastern Ontario Ayrshire Breeders' Club	150
Hallville Ladies' Short Course	70
Anglican Church, North Gower, picnic	75
Visitors to K. A. S. Royal	200
" " Live Stock Sale	200

Owing to the increased attendance in the classes in agriculture, it will be necessary to provide additional accommodation for laboratory work, as some of our present laboratories are much too small. This is particularly true in Farm Mechanics and in greenhouse accommodation.

The health and increase in all our herds and flocks have been quite satisfactory during the past year. No additions have been made, except the purchase of a choice Yorkshire hog, whose sire and dam were both grand champion at the 1928 "Royal."

Field Husbandry

Considering the dry year, the crops on the Kemptville Agricultural School farm were very good. The hay crops were exceptionally heavy and excellent weather prevailed which aided in saving and making extra good quality hay. Clovers received a set-back due to the cold wet spring, but revived sufficiently to give a good yield. The sweet clover crop which was grown for silage purposes was harvested and ensiled in the best of condition. The yield per acre was 9.5 tons.

The grain yields were not as heavy, with the exception of fall wheat, as in 1928. The fall wheat, however, was perhaps the best crop we ever harvested, the yield being thirty-one bushels per acre. A few depressed areas in this field which were killed out by water, reduced the yield considerably. This only goes to show that fall wheat requires well drained or naturally well-drained soils. The Kharkov variety was the only variety sown. An application of straight phosphoric acid was used on part of the field at the rate of 250 pounds per acre; the other part receiving an application of 0-12-6 fertilizer at the same rate. These applications are to be recommended; the 0-12-6 perhaps being the most effective.

Considering the drought mangel and potato crops were fairly heavy, and were harvested in good condition. The potatoes are certified Irish Cobbler.

The new seedings of clover and alfalfa did not show as much promise as the previous year; this, no doubt, being due to the dry summer. Permanent pasture area yielded an excellent stand of succulent grass during the dry spell, when other pastures had dried up.

We have always emphasized after-harvest cultivation for the control of weeds. This past season was one of the very best for carrying on this major method of keeping weeds under control, as it was very dry and warm.

Most of the 1928 grain crops were sold for seeding purposes to farmers of the surrounding districts. There is a growing demand for good seed. The seed cleaning plant, as usual, has been kept busy during the winter months. Farmers are availing themselves of this opportunity to have their seed cleaned and graded with the more efficient machines, one hundred and fifty-nine farmers making use of the plant during the winter of 1928-29.

Horticulture

During the winter and spring terms lectures and practical instruction were given in Pomology, Floriculture, Vegetable Gardening, as well as in the subjects of Botany and Entomology. Assistance was given to several of the Agricultural Representatives during short courses or when a special lecture was requested. Similar assistance was rendered to several organizations and societies during the year.

During the year a project was put forward to encourage the planting of trees and shrubbery, to improve the general appearance and attractiveness of farm homes. This project received the most hearty and encouraging support from the Agricultural Representatives in the eastern counties, and with this in view arrangements are being made for lectures at a number of points.

It is hoped that by suggestive instruction, and competition, a number of the young farmers who are at present closely associated with the Agricultural Representatives in other lines of work, may be encouraged to extend their interest and energies to this important phase of country life.

The past summer was one of the most disappointing season experienced in connection with the school orchard. A good set of fruit was obtained on most varieties, and many favourable comments were made by visitors to the school, on the general prospects of a good crop of fruit. Through the latter part of July, August, and early September, an exceptionally long period of dry weather was experienced; some varieties became seriously defoliated, and to save the trees it was necessary to shake off a considerable quantity of the fruit. Owing to the shallow nature of the soil, the fruit of all varieties was considerably below average in size, but Milwaukee and Wealthy suffered most severely, owing to the shallow nature of the soil.

The effect of the long period of dry weather produced negative results in a fertilizer test that had been initiated during the year. It is intended to carry on this test over a number of years so that definite data may be obtained regarding the most suitable kind and quantity of fertilizer to use in orchards situated on a type of soil such as that at Kemptville. In this test, generous assistance has been given by several firms dealing in fertilizers, and their continued support has been promised for a number of years. It is, therefore, the more regrettable that the first year under test should have been under such exceptional conditions.

Towards the close of the season, a further extension of the grounds surrounding the school buildings was begun. Owing to the increasingly heavy traffic on the highway and the increasing number of visitors to the Institution, it was deemed advisable to construct an entrance both safer and more readily available to those entering or leaving the school. This work will take some time to complete, but a fairly good beginning has already been made.

POULTRY

A very successful season was experienced during the past year, although the financial returns were about two hundred dollars below the preceding twelve months. This condition was due to the abnormally low prices received for poultry products during January, 1929.

The extension work carried on this year showed a very substantial increase over the previous year. A very gratifying feature of extension work was the demand for follow-up meetings. A number of summer meetings were held for the purpose of instructing the people in culling, killing and dressing. In the fall, follow-up meetings were held in the same localities for the purpose of giving instruction in housing, feeding and management. This work was particularly gratifying in Glengarry County.

A four-days' short course was held in Carleton County for the purpose of training a number of Junior Farmers in poultry culling. A large turnout was secured, and the boys have since done some very valuable work in their home county.

The demand for breeding stock and hatching eggs now far exceeds the supply, which shows an increased interest in pure bred poultry in Eastern Ontario.

FARM MECHANICS AND DRAINAGE

The regular lectures in the above subjects were carried on with the regular students, and summer course students as well. Several short courses were attended, as well as farmers' clubs, and township council meetings. The practical work for regular students consisted of erecting poultry shelters for young stock, and the construction of and wiring for an outdoor rink.

The drainage calls during the year were the most extensive that this division has experienced, and with the addition of one field man we were unable to attend to all. The interest in this work is increasing rapidly.

As a result of this work, a record number of surveys were made, most of which were actually installed. Several machines are now available and nine townships passed by-laws taking advantage of the provisions of the Tile Drainage Act. This will stimulate the interest.

APICULTURE

Conditions during the early part of last year were somewhat better than the year previous, as colonies came out of winter quarters in much stronger condition, and, as a result, were able to build up more quickly. The season opened early, and a continuous supply of pollen and nectar was produced until on toward the close of the light honey flow. At this period, the plants suffered from the drought, and the late or dark honey flow was, as a result, considerably lighter than usual.

More inquiries were dealt with this past year than heretofore, as some thirty apiaries large and small were visited. Foul brood seems to be fairly prevalent.

NEW LISKEARD DEMONSTRATION FARM

Exceptionally favourable weather conditions throughout the year made it possible to operate the farm with better than average results. The winter months of 1929 were above the average in temperature, depth of snow and general weather conditions. These favourable conditions resulted in a fairly early break-up permitting getting on the land in good time. Good weather prevailed throughout the seeding period and crops got away to a good start. The early growth of all spring crops as well as meadow fields was most satisfactory resulting in wonderful stands of grain throughout the district which ripened up well. The absence of summer frosts permitted grain filling well, colour, quality and yield being well up to, if not above, the average. Some difficulty was experienced during the harvesting period because of wet weather, the alsike clover seed crop being more seriously affected than other crops.

Some of the outstanding features of the work of the farm during the year have been the sale and distribution of good young pure bred bulls, Holstein and Shorthorn, the enlarging of its sheep club policy, further demonstrations in the production of fall wheat with an average yield for the past three years of 31.4 bushels per acre, variety used Dawson's Golden Chaff. The selling and distribution of pure-bred rams is an important feature. This year an outstanding demonstration was conducted under general field conditions with early maturing varieties of oats, Alaska and O.A.C. No. 3 being used. A forty-acre field of Alaska oats yielded an average of better than fifty bushels per acre. Valuable information is gradually being obtained from variety tests with cereals and other classes of grains.

Work with small fruits, especially raspberries and strawberries, is very interesting and results obtained have been beyond expectations. Raspberries did exceptionally well this year.

Summer fallowing as a destroyer of weeds has been carried on for several years and works into crop rotation along with fall wheat. The weed menace is constantly to the fore and while the district as a whole is comparatively free from noxious weeds, there are certain areas rather badly infested. Splendid work has, however, been accomplished as a result of co-operation between the Department and weed inspectors which if kept up for a number of years, must accomplish a great deal in the destruction and spread of weeds.

A number of fertilizer tests were conducted, having in mind increased yields and the hastening of maturity, most noticeable results having been in increasing the yield of turnips.

An increasing demand from the general public of the district for more horticultural and more home beautification work makes it necessary for plans to be made to meet these demands.

The winnings in some of the seed classes at the Ottawa Winter Fair is proof of the quality of some of the crops produced in the district. Mr. Edson Jibb of Kerns Township, R.R. No. 1, New Liskeard, won the championship prize in barley. Charles Thomas of the same township, won first prize in the open competition on his O.A.C. No. 3 oats, while the boys and girls of the district in School Fair work, won for the second year in succession, the Senator Hayden Trophy in the Junior Competition.

DATES OF FARM OPERATIONS

The dates upon which the more important farm operations commenced for the past year, are as follows:

First crow	March 11th.
First robin	April 8th.
First wild geese	April 19th.
Fields clear of snow	April 8th.
Ice out of Wabi River	April 8th.
Ice out of Lake Temiskaming	May 4th.
First work on land	April 23rd.
First work on land (plowing)	April 26th.
First work on land (cultivating)	April 27th.
First seeding (cereals)	May 27th.
First planting potatoes	June 4th.
First seeding turnips	June 11th.
Summer fallowing commenced	May 22nd.
Ensilage cut	July 10th and 16th.
First cutting mixed hay	July 25th to 26th.
First cutting mixed clover	July 17th to 26th.
First cutting fall wheat	August 16th.
Summer fallowing finished	August 30th.
First cutting cereals	August 24th to September 15th.
Seeding winter wheat	August 31st.
First digging potatoes	September 26th.
First harvesting turnips	October 5th.
Plowing stopped by frost	November 20th.

PRECIPITATION

Total precipitation for year November 1st, 1928 to October 31st, 1929	28.58 inches
Average precipitation for last five years	27.07 “
Total precipitation for seven months ending October 31st, 1929	23.02 “
Month having greatest precipitation	September.

TEMPERATURE

Highest temperature during year	92 degrees on May 29th.
Lowest temperature during year	38 degrees below zero on the 14th January and the 13th February.
Average highest temperature for year	65.5 degrees.
Average lowest temperature for year	4.83 degrees.
Average monthly temperature for year	38.1 degrees.
Last frost	June 2nd.
First frost	September 19th.
Length of frost-free period	108 days.
Average frost-free period for thirty-five years	120 days.
Shortest frost-free period on record	73 days in 1923.
Longest frost-free period on record	157 days in 1909.

SUNSHINE

Bright sunshine on	268 days.
Total number of hours of bright sunshine	1,496.4 hours.
Average number of hours sunshine per day	4.09 hours.
Yearly average number of days with bright sunshine for five years	266 days.
Month having greatest number of hours of sunshine	July, 219.3 hours.
Month having least number of hours of sunshine	December, 33.9 hours.

WEATHER OBSERVATIONS, 1928-1929

Month	Temperature					Sunshine		
	Highest	Date	Lowest	Date	Average	Average for 35 years	Days of bright sunshine	Hours of sunshine
November, 1928	54	14	– 2	26	29.6	x27.6	15	51.0
December, 1928	40	14 & 16	–17	8	22.7	x14.9	10	33.9
January, 1929	39	6	–38	14	7.09	xx 2.6	19	59.0
February	38	27	–38	13	4.60	xx 5.8	22	107.8
March	46	29 & 30	–24	8	23.09	xx16.6	23	111.9
April	65	27	– 9	2	36.3	35.9	24	169.8
May	92	29	21	13	49.1	49.6	26	173.0
June	89	18	32	2	59.1	60.5	29	183.3
July	89	27	43	2 & 19	66.9	66.0	27	219.3
August	82	9	44	7	62.4	61.5	27	179.3
September	89	2	27	19	55.6	54.6	25	128.4
October	63	15	19	18	41.5	42.5	21	79.7

xAverage for six years.
xxAverage for seven years.

PRECIPITATION

Month	RAIN			SNOW		TOTAL AS RAIN	
	Days rain fell	Inches	Days snow fell	Inches	Days	Inches	Average for 35 years
November, 1928	8	.60	12	4.50	16	1.05	x1.95
December, 1928	4	.04	15	6.35	18	.67	x1.29
January, 1929	1	.20	22	21.70	22	2.37	xx1.16
February	2	T.	15	3.25	16	.32	xx1.15
March	7	.31	13	8.45	19	1.15	xx1.24
April	6	1.34	6	9.25	8	2.26	1.82
May	10	1.15	6	1.70	11	1.32	2.64
June	13	3.56	....	....	13	3.56	2.88
July	13	3.76	....	....	13	3.76	3.67
August	17	2.08	....	....	17	2.08	2.76
September	15	6.06	....	....	15	6.06	3.43
October	16	3.98	....	....	16	3.98	2.94

Totals and Averages for Seven-Month Period

1—Temperature:	Highest	Lowest
April, 1929	65	-9
May	92	21
June	89	32
July	89	43
August	82	44
September	89	27
October	63	19
Totals	569	177
Averages	81.2	25.2

2—Precipitation:	
April, 1929	2.26
May	1.32
June	3.56
July	3.76
August	2.08
September	6.06
October	3.98
Total	23.02
Averages	3.28

3—Sunshine:	Days	Hours
April, 1929	24	169.8
May	26	173.0
June	29	183.3
July	27	219.3
August	27	179.3
September	25	128.4
October	21	79.7
Totals	179	1,132.8
Averages	25.5	161.8

Total Hours Sunshine for Last Six Years

November 1st, 1923 to October 31st, 1924	1,485.6	hours
November 1st, 1924 to October 31st, 1925	1,487.8	"
November 1st, 1925 to October 31st, 1926	1,573.9	"
November 1st, 1926 to October 31st, 1927	1,590.4	"
November 1st, 1927 to October 31st, 1928	1,412.3	"
November 1st, 1928 to October 31st, 1929	1,496.4	"
Total	9,046.4	hours
Average Number Hours per Year	1,507.7	"

DIRECTION OF WIND

Month	By Twelve-Hour Periods								
	N.	N.W.	W.	S.W.	S.	S.E.	E.	N.E.	Prevailing direction
November, 1928	4	21	12	10	2	9	0	1	N.W.
December, 1928	2	20	7	13	6	11	1	2	N.W.
January, 1929	0	37	2	4	1	14	0	4	N.W.
February	1	28	1	6	3	7	3	7	N.W.
March	3	30	1	7	0	12	2	7	N.W.
April	6	19	1	5	0	10	6	12	N.W.
May	7	22	3	21	1	5	0	3	N.W.
June	2	29	6	7	2	8	3	3	N.W.
July	3	25	6	16	2	8	1	1	N.W.
August	1	29	0	17	2	8	2	0	N.W.
September	8	16	2	17	1	10	0	4	S.W.
October	20	9	11	5	7	2	1	4	N.

Seasonal Notes

A study of the weather tables of last year and this year is of interest because of the following facts:

Ten inches less total precipitation 28.58 for 1929 as compared with 38.57 for 1928, a higher average temperature for the year, more heat during the growing season, a frost free period of about the same number of days and eighty-four more hours of bright sunshine. These conditions were all reflected in the bountiful harvest of good crops throughout the district.

The first work done on the land was on April 23rd, as compared with May 8th of the year before.

HERD RECORDS FOR 1929

Name of Cow	Age at beginning of lacatation period	Date of freshening	Number of days in period	Total pounds milk produced
(Holstein)				
Academy Pontiac Echo	4 years	Apr. 10/28	266	10,410
Academy Pauline Echo	4 "	May 21/28	283	9,351
Daisy Artis Dutchland	4 "	Mar. 12/29	234	9,699
DeKol Butter Lass Korndyke	2 "	Feb. 19/28	342	6,535
Daisy Artis Canary	2 "	May 1/29	184	4,123
Faforit Hartog Johanna	5 "	June 4/28	280	10,003
Francy Johanna Hartog	5 "	Mar. 18/28	288	9,935
Francy Johanna Korndyke	2 "	Apr. 17/28	349	7,640
Hartog Johanna Pontiac Echo	2 "	Mar. 8/28	238	6,358
Korndyke Johanna DeKol	2 "	Mar. 2/28	315	6,258
Lady Jemima of Temiskaming	2 "	Apr. 16/28	351	9,242
Lady Rolo Hartog	2 "	Apr. 22/28	333	6,568
Lady Snowflake of Temiskaming	5 "	Jan. 3/28	421	14,677
Maggie Abbekerk Canary	2 "	Apr. 3/28	356	9,352
Totals	43 years		4,240	120,151
Averages	3.0 "		302.1	8,582.2
(Shorthorn)				
Lady Cruickshank 4th	10 years	Nov. 1/28	365	9,881
Lady Refiner 2nd	4 "	Dec. 28/28	306	6,261
Nellie Cruickshanks	4 "	Dec. 19/28	221	3,146
Lady Peer 7th	7 "	Nov. 11/28	262	3,619
Lady Melody Cruickshank	2 "	Oct. 9/28	295	2,625
Lady Melody Refiner	2 "	June 24/29	130	1,691
Rosebud Patricia	4 "	Oct. 23/28	329	7,269
Totals	33 years		1,908	34,492
Averages	4.7 "		272.5	4,927.4
Totals of whole herd	76 years		6,148	154,643
Averages of whole herd	3.6 "		292.7	7,363.9

HERD RECORDS FOR 1929

Name of Cow	Daily average yield of milk	Average per cent. fat	Value of whole milk at 10c. per quart	Number pounds of butter fat
(Holstein)				
xAcademy Pontiac Echo	39.13	3.42	$416 40	356
Academy Pauline Echo	33.04	3.61	374 04	338
Daisy Artis Dutchland	41.44	4.16	387 96	403
DeKol Butter Lass Korndyke	19.10	4.53	261 40	296
Daisy Artis Canary	22.40	4.20	164 92	173
Faforit Hartog Johanna	35.72	3.73	400 12	373
Francy Johanna Hartog	34.49	3.50	397 40	348
Francy Johanna Korndyke	21.89	3.80	305 60	290
Hartog Johanna Pontiac Echo	26.71	3.50	254 32	223
Korndyke Johanna DeKol	19.86	4.03	250 32	252
xLady Jemima of Temiskaming	26.33	3.58	369 68	331
Lady Rolo Hartog	19.72	3.75	262 72	246
Lady Snowflake of Temiskaming	34.86	3.20	587 08	470
xMaggie Abbekerk Canary	26.26	3.69	374 08	345
Totals	400.95	52.70	$4,806 04	4,444
Averages	28.63	3.76	343 28	317.42
(Shorthorn)				
xLady Cruickshank 4th	27.07	4.40	$395 24	435
xLady Refiner 2nd	20.46	4.66	250.44	292
Nellie Cruickshank	14.23	4.77	125.84	150
Lady Peer 7th	13.81	4.31	144.76	156
Lady Melody Cruickshank	8.89	4.38	105.00	115
Lady Melody Refiner	13.00	4.20	67 64	71
xRosebud Patricia	22.09	4.57	290.76	332
Totals	119.55	31.29	1,379.68	1,551
Averages	17.07	4.47	197.09	221.57
Totals for whole herd	520.50	83.99	6,185 72	5,995
Averages of the whole herd	24.78	3.99	294 55	285.4

xQualified in Record of Performance.

ANIMAL HUSBANDRY

The Dairy Herd. The dairy herd has during the year given a very creditable showing as indicated in the following tables. The average milk production per cow might be better but when it is understood there are a great many heifers in the herd, the average production may be considered satisfactory. Of interest is the average per cent. butterfat, Holsteins, 3.76; Shorthorns, 4.47. Special efforts are made to keep up the butterfat test of the herd especially in view of the distribution of a number of young bulls and keeping in mind the fact that the majority of farmers throughout this and other sections of the north, are producing cream for butter production. The farm is having possibly the same experience with the breeding of Shorthorns for milk production as others have had, finding out that heifers bred along milk production lines do not always measure up to what is expected of them.

Six good young bulls were disposed of during the year ranging in age from six months to one year. No young bulls are allowed to leave the Farm before they are six months of age. This policy is adopted to permit these calves to get away to a good start before switching them to a change of feed and environment.

The entire herd is still entered in the Record of Performance, six individuals qualifying within the year. The herd is regularly tested for T.B. and also inoculated once a year against hemorrhagic septicemia.

Feeds used are mostly produced on the Farm with the exception of bran and oil cake. Chop, oats and barley in the proportion of two to one, makes up the grain part of the ration which along with red clover silage, turnips in the fall and the early part of the winter, and clover hay, complete the ration:

LIST OF SHORTHORNS—January 1st, 1930

1 mature bull.
8 milch cows (including 1 heifer).
1 two-year-old heifer.
4 yearling heifers.
3 bull calves.
2 heifer calves.
Total—19.

LIST OF HOLSTEIN—January 1st, 1930

1 mature bull.
13 milch cows (including 3 heifers).
1 two-year-old heifer.
2 yearling heifers.
4 junior yearling heifers.
2 heifer calves.
2 bull calves.
Total—25.

Sheep. The pure-bred flock of Shropshire sheep has given a splendid return for the year, not only in lamb production but in the production of wool of a very good quality.

The Dominion Live Stock Branch supplied information on the grading of each individual fleece, the grade being noted in the accompanying table. As three-eighth staple is the standard grade for the breed, it will be noted that the flock grades up well in this regard.

Seven pure-bred rams were sold for breeding purposes this year. Eight young bucks are being kept over for next year to be sold as shearlings. A new ram was purchased this year to replace the old Shields ram used for the past few years. Special attention is given to the sheep flock in order to keep it well up to the standard for the breed and to make it a worthwhile demonstration.

Dipping, drenching, along with the use of iodine during the winter months, have helped wonderfully to keep the flock up to the standard. The Farm cannot too highly recommend these things to all sheepmen in order to obtain the best results.

Sheep Club Policy. The Farm Sheep Club Policy is gradually being extended with very gratifying and satisfactory results. The demand for flocks is much beyond the material available. The few figures noted below is an indication of the extension of the sheep industry throughout this section of the north during the past three years.

Year	Wool Shippers	Wool	Average Clip
1927	32	7,144	223.2 lbs.
1928	37	9,674	261.4 "
1929	53	12,021	226.8 "

LIST OF BREEDING EWES FOR 1930

Registered number	Age years	Weight	Weight of fleece	Grade of fleece
39541	6	180	8½	1/4 staple
39548	6	185	8	3/8 clothing
39558	6	195	8½	3/8 staple
44838	5	195	9	1/4 “
48216	4	180	7½	3/8 “
51364	3	192	8	3/8 “
51391	3	190	8	3/8 “
51397	3	165	9	3/5 “
51402	3	205	11	1/4 “
51404	3	185	11	1/4 “
51405	3	175	8	3/8 “
51417	3	175	8	1/4 “
51423	3	195	8	3/8 “
55804	2	168	8½	3/8 “
55882	2	200	7½	3/8 “
55799	2	180	8½	3/8 “
60842	1	185	9	1/4 “
60846	1	150	10	1/4 “
60845	1	180	8	1/4 “
60851	1	150	7½	3/8 “
60853	1	165	7	3/8 “
60856	1	154	9½	3/8 “
60859	1	165	7½	3/8 “
60860	1	150	7¾	1/4 “
60861	1	160	9	3/8 “

Average weight of breeding ewes.............................. 176.9 lbs.
Average weight per fleece.................................... 8.49 lbs.

EWE LAMBS, 1929

Private Number	Registered Number	Weight
29-1	66,832	116
29-3	66,833	106
29-7	66,835	92
29-9	66,837	100
29-11	66,840	103
29-13	66,842	110
29-15	66,843	79
29-17	66,844	93
29-19	66,849	111
29-23	66,850	124
29-25	66,851	92
29-27	66,852	103
29-29	66,853	97
29-21	66,845	100

Average weight per lamb...................................... 101.8 lbs.

Hogs. Work done with hogs throughout the year is of interest more especially from the standpoint of the sale and distribution of breeding stock. The ease with which the farmers can apparently get into the hog business and out again if necessary, makes this work more or less spasmodic.

Horses. It is found necessary to keep three mature teams in order to do the necessary work on the farm, consisting of 330 acres. Horse power is supplemented by tractor power.

It is regarded as important to especially refer to the excellent results obtained from systematic treatment for the eradication of worms. The horses had not been doing well and it was therefore decided to treat at intervals over a definite period of time and it is worthy of note that immediately following the treatment, the horses not only gained in flesh but held their flesh through heavy work. It would appear that in the advocating of treatment for sheep, hogs, and poultry that the horse is sometimes overlooked. The results above referred to is proof of the necessity for checking up on the treatment of horses as well.

Poultry. Work with poultry was carried on in a small way with a flock of one hundred birds which gave very satisfactory results. Plans are now under way for the extension of poultry work in order to meet the needs and requirements of the district. The Farm has in mind testing out the use of artificial heat and its influence on egg production during the cold winter months. Barred Rocks is the only breed being kept, new houses being required before other breeds can be added to the flock.

Poultry in the district is making very rapid progress, farmers who a few years ago were giving their flock only indifferent care and attention are to-day specializing or planning to specialize in poultry—at least to make the flock a major project on the farm. The Demonstration Farm therefore must give more thought and attention to this line of work if it is to lead in the advancement of poultry raising in this part of the north country.

FIELD HUSBANDRY

Hay Crops. The farm had one hundred acres in hay, a mixture of timothy, red clover, some alsike and alfalfa. Red clover is however, the dominating factor in hay production. Cutting commenced July 17th and was completed about July 26th. Weather conditions were most favourable, the quality of the hay never better and the yield averaged 1.8 tons per acre. Twenty-nine acres of the one hundred were used for silage, leaving the balance for a cured hay crop.

Silage. The general practice of using red clover as a silage crop was again followed and as has been stated, twenty-nine acres were used for the filling of two large silos. The first year's crop of clover is always used for this purpose and is almost 100 per cent. red clover. This year a somewhat larger acreage was required for filling the silos than in 1928, the yield per acre not being so heavy. The Farm has had excellent results from the use of red clover as a silage crop and it can be harvested very early in the season and at a time when it does not interfere with the harvesting of the regular hay crop or grain crops. The yield per acre may be less than that of some of the other crops such as O. P. V. but on the other hand, it makes a very cheap silage crop, no spring work being required in connection with its production at all.

Grain Crops. The seeding of barley commenced May 27th, the last seeding of oats on May 31st. Barley was harvested August 24th, just three months from date of seeding. Forty acres of Alaska oats were grown, ninety-nine days intervening between date of seeding and date of harvesting, the average yield per acre being fifty bushels. A fifteen acre field of O.A.C. No. 3 oats was seeded May 30th, requiring 102 days to mature, yielding fifty-five bushels per acre. A twenty-acre field of Dawson's Golden Chaff fall wheat was harvested August 16th, yielding an average of thirty-one bushels per acre, the quality of the grain being good to excellent.

The Farm thinks very highly of early maturing varieties of cereals but points out the necessity for a good seed bed and a fertile soil. This is regarded as being necessary to obtain a satisfactory yield. The production of barley throughout the district is increasing more rapidly with a greater realization of its suitability to soil and climatic conditions. The Canadian Malting Company rates north country barley among the best.

Experimental Work. The necessity for carrying on a limited amount of experimental work each year is demonstrated more forcibly as the years go by. This fact is reasonable when one realizes that the Farm is serving a new country with problems peculiar to itself and different to those found in the older part of the Province. The field testing of grain, roots, vegetables and grain crops along with some fertilizer work makes up the bulk of the plot work for the year. The following tables if studied in detail will be found of much interest. In checking results of one variety against another, reference being made more especially to yield per acre, it must be kept in mind that soil variation, the variation in germination and in some instances location has an influence on yield. Attention is drawn to the early maturing varieties of cereals and while yields per acre are less, days from seeding to maturity is a major factor.

VARIETY TEST WITH SPRING WHEAT

Date of Seeding, May 20th. Rate 2 bushels per acre.

Variety	Date of ripening	Number of days ripening	Yield of grain per acre
Reward	Aug. 31st	104	26.6 bush.
Garnet	Aug. 16th	89	40.0 "
Marquis	Aug. 29th	102	43.3 "
White Marquis	Aug. 29th	102	30.0 "
Quality	Aug. 29th	102	25.0 "
O.A.C. No. 85	Sept. 5th	109	48.3 "
Early Red Fife (N.L.)	Aug. 29th	102	30.8 "
Early Red Fife (Ott.)	Aug. 29th	102	28.3 "
Ruby	Aug. 15th	88	25.0 "
Wild Goose	Sept. 9th	113	40.8 "
Durum	Sept. 5th	109	40.0 "
Emmer	Sept. 2nd	106	53.3 "

RATE OF SEEDING TEST WITH SPRING WHEAT

Date of Seeding, May 20th. Rate 1.5 bushels per acre.

Variety	Date of ripening	Number of days ripening	Yield of grain per acre
Reward	Aug. 19th	92	30.0 bush.
Garnet	Aug. 16th	89	31.6 "
Marquis	Aug. 28th	101	26.6 "

NOTE.—The Farm is favourably impressed with the possibilities of Reward Spring wheat and next year will grow it under field conditions for the first time. One-tenth of an acre produced an average of 31 bushels per acre.

VARIETY TEST WITH OATS

Date of Seeding, May 22nd. Rate 3 bushels per acre.

Variety	Date of ripening	Number of days ripening	Yield grain per acre
Abundance (Ottawa)	Sept. 2nd	104	73.5 bush.
Abundance (N.L.)	Sept. 2nd	104	61.7 "
O.A.C. No. 72	Sept. 9th	111	44.1 "
Sparkler	Sept. 2nd	104	75.0 "
Liberty	Aug. 31st	102	76.4 "
O.A.C. No. 144 (N.L.)	Sept. 2nd	104	55.8 "
O.A.C. No. 144 (Chas. Thomas)	Sept. 2nd	104	55.8 "
Assalman	Sept. 2nd	104	47.0 "
Joanette	Aug. 23rd	94	57.3 "
Banner	Sept. 2nd	104	79.4 "
Victory	Sept. 2nd	104	70.5 "
Alaska	Aug. 15th	86	57.3 "
O.A.C. No. 3 (N.L.)	Aug. 15th	86	61.7 "
O.A.C. No. 3 (Guelph)	Aug. 15th	86	82.3 "

RATE OF SEEDING TEST WITH OATS

Date of Seeding, May 22nd. Rate of Seeding, 2.5 bush. per acre.

Variety	Date of ripening	Number of days ripening	Yield of grain per acre
Alaska	Aug. 15th	86	82.3 bush.
O.A.C. No. 3	Aug. 23rd	94	79.4 "

VARIETY TEST WITH BARLEY

Date of Seeding, May 28th. Rate of Seeding, 2 bush. per acre

Variety	Date of ripening	Number of days ripening	Yield of grain per acre
O.A.C. No. 21	Aug. 27th	92	62.5 bush.
Charlottetown No. 80	Sept .2nd	98	52.0 "
Manchurian	Aug. 21st	86	60.4 "
Chinese	Aug. 27th	92	50.0 "
Himalayan	Aug. 28th	93	39.5 "
Guy Mayle	Aug. 28th	93	37.5 "
Black Hulless	Aug. 21st	86	66.6 "

RATE OF SEEDING TEST WITH BARLEY

Date of Seeding, May 28th. Rate of Seeding, 2.5 bush. per acre.

Variety	Date of ripening	Number of days ripening	Yield of grain per acre
O.A.C. No. 21	Aug. 27th	92	50.0 bush.

SILEAGE MIXTURE

Date of Seeding, May 21st.

Mixture	Date of ripening	Number of days ripening	Yield of tons per acre
Oats—O.A.C. No. 72	Aug. 22nd	93	7 tons
Peas—Potter			
Oats—O.A.C. No. 72	Aug. 22nd	93	9.6 "
Peas—Potter			
Spring Vetch			
Sunflower (Mammoth Russian)	Sept. 24th	126	26.25 "

Soy Beans. Soy beans were tested out with rather indifferent results. The object of the test being to determine their suitability as a soiling crop or a green fodder crop. The Ogemaw matured a small quantity of seed which will be tested out next year. It is an early maturing variety and may find a place in clay belt agriculture.

Mixed Grain. The following table is interesting from the fact it brings out the suitability of the O.A.C. No. 181 field pea for clay belt conditions. Referring back to the field test with peas, it is noted it ripened in ninety-nine days and gave a very satisfactory yield.

The mixture of oats, barley and peas ripening in one hundred and one days and yielding 2,200 pounds is also interesting. This approximates a yield of about forty-seven bushels per acre.

VARIETY TEST WITH PEAS

Date sown, May 25th

Variety	Date of ripening	Number of days ripening	Yield per acre
Canadian Beauty	Sept. 9th	108	31.6 bush.
Early Raymond	Sept. 2nd	101	48.3 "
Potter	Sept. 9th	108	30.0 "
Thos. Laxton	Aug. 24th	92	28.3 "
Chancellor	Aug. 31st	99	40.8 "
Golden Vine	Sept. 5th	104	40.0 "
O.A.C. No. 181	Aug. 31st	99	39.1 "
Zippinaw	Sept. 7th	106	30.8 "
White Wonder	Aug. 28th	96	11.6 "
Little Twin	Aug. 28th	96	20.8 "
Mackay	....	....	22.5 "
Temiskaming	....	....	30.0 "
Early Britain	Sept. 12th	111	21.6 "

PLOTS OF MIXED GRAINS

Date of Seeding, May 21st

Mixture	Date of ripening	Number of days ripening	Yield of grain per acre
Oats (O.A.C. No. 3) Wheat (Reward)	Aug. 21st	93	1,450 lbs.
Oats (Alaska) Wheat (Reward)	Aug. 21st	93	1,450 "
Oats (O.A.C. No. 3) Wheat (Garnet)	Aug. 20th	92	1,500 "
Oats (Alaska) Wheat (Garnet)	Aug. 20th	92	1,200 "
Oats (Banner) Wheat (Marquis)	Sept. 4th	107	1,825 "
Oats (O.A.C. No. 72) Wheat (Marquis)	Aug. 31st	103	1,800 "
Oats (O.A.C. No. 3) Barley (O.A.C. No. 21)	Aug. 20th	92	1,500 "
Oats (Alaska) Barley (O.A.C. No. 21)	Aug. 20th	92	1,800 "
Oats (O.A.C. No. 72) Peas (O.A.C. No. 181)	Sept. 4th	107	1,900 "
Oats (O.A.C. No. 72) Barley (O.A.C. No. 21) Peas (O.A.C. No. 181)	Aug. 29th	101	2,200 "
Oats (O.A.C. No. 72) Barley (O.A.C. No. 21) Peas (Early Raymond)	Aug. 29th	101	2,000 "

OTHER GRAINS

Variety	Yield per plot (pounds)	Yield per acre (bushels)
Buckwheat (Routh) (1/100 acre)	14 lbs.	29.1 bush.
Buckwheat (Silver Hull) (1/100 acre)	15 "	31.2 "
Flax (Premost) (1/100 acre)	14 "	25.0 "
Novelty Flax (1/100 acre)	12 "	21.4 "
Flax (Common) (1/100 acre)	12 "	21.4 "

FIELD, ROOT AND VEGETABLE CROPS

Date of Seeding, May 31st and June 7th.
Size of plot, 1 row 175 feet long, unless otherwise specified.
Date Harvested, September 24th, 1929.

Variety	Yield per plot (pounds)	Yield per acre (bushels)
Carrots (Chantenay)	174 lbs.	290.0 bush.
Carrots (Large White Belgian)	93 "	155.0 "
Carrots (Mammoth Short White)	140 "	233.3 "
Beets (Detroit Dark Red)	207 "	345.0 "
Mangels (Yellow Leviathan)	255 "	425.0 "
Turnips (Nimble Dick)	292 "	486.6 "
Turnips (Golden Ball)	142 "	236.6 "
Turnips (Canadian Gem)	153 "	255.0 "
Butter Beans	17 "	28.3 "
Onions (Yellow Globe Danver) (1/100 of an acre plot)	74 "	148.0 "
Onions (Ailsa Craig) (1/100 acre)	90 "	180.0 "
Onions (Japanese or Ebenezer) (1/100 acre)	92 "	184.0 "
Onions (Dutch Sets) (1/100 acre)	60 "	120.0 "

NOTE.—The above table listing yields of various crops proves that vegetables do very well. Work was carried on with tomatoes, squash, pumpkins, cucumbers, cabbage and cauliflower, and all gave very satisfactory results. Swiss chard, broad beans, spinach and citron also did well.

POTATO YIELD

Date of Seeding, June 4th. Date of Harvesting, September 26th.

Size of plot, 1 row, 175 long (1/100 acre).

Variety (Harvested September 26th)	Yield per plot (Pounds)	Yield per Acre (Bushels)
Irish Cobbler	98 lbs.	163.3 bush.
Green Mountain	103 "	171.6 "
Dooley	102 "	170.0 "
Pioneer Pride	105 "	175.0 "
Cup	35 "	58.3 "
Blue	70 "	116.6 "
Irish Cobbler (Certified)	150 "	250.0 "
Irish Cobbler (Certified)	147 "	245.0 "

FERTILIZER EXPERIMENT WITH POTATOES

Plot No.	Fertilizer mixture	Yield per plot (pounds)	Yield per acre (bushels)
1.—Irish Cobbler	2-12-6	145	241.4
Check		160	266.6
2.—Green Mountain	2-12-6	198	330.0
Check		175	291.4
3.—Dooley	2-12-6	161	268.3
Check		167	278.3
4.—New Brunswick	2-12-6	197	328.3
Check		161	268.3

FERTILIZER TESTS WITH GRAIN CROPS

Plot No. or Variety	Fertilizer Mixture	Yields plot (pounds)	Yields per acre (bushels)
Barley:			
O.A.C. No. 21	0–12–12	20	41.6
Check	....	28	58.3
Barley:			
O.A.C. No. 21 (duplicate)	0–12–12	19	39.5
Check	....	28	58.3
Oats:			
Alaska	0–12–12	18	52.9
Check	....	16	47.0
Oats:			
Alaska (duplicate)	0–12–12	24	70.5
Check	....	13	38.2
Turnips:			
....	0–12–6	278	463.3
Check	....	177	295.0
Turnips:			
(Duplicate)	0–12–6	271	451.6
Check	....	141	235.0

FERTILIZER TESTS WITH GRAIN CROPS

Plot No. and Variety	Fertilizer Mixture	Yield per plot (pounds)	Yield per acre (bushels)	No. of days ripening
Oats:				
O.A.C. No. 3	0–16–0	18	52.9	83
Alaska	0–16–0	26	76.4	83
Abundance	0–16–0	27	59.4	102
Liberty	0–16–0	23	67.6	98
Barley:				
O.A.C. No. 21	0–16–0	25	52.0	92
Black Hulless	0–16–0	25	52.0	86
Peas:				
Canadian Beauty	Muriate of Potash	33	55.0	108
Early Raymond	"	32	53.3	101
Potter	"	27	45.0	108
Chancellor	"	30	50.0	99
Golden Vine	"	31½	52.5	111
O.A.C. No. 181	"	30	50.0	99
Zippinaw	"	27	45.0	106
White Wonder	"	28	46.6	96
Early Britain	"	27	45.0	108

Fertilizer Experiments. Fertilizer tests were carried on with oats, barley, peas, potatoes and turnips. It was found that oats and barley were influenced very little in their yield. An application of muriate of potash increased quite materially the yield per acre of peas and seemed to react favourably in a stronger and more vigorous growth. This fertilizer was applied to peas more particularly to determine its influence on the boiling quality of this grain. Turnips responded most splendidly to an application of 0-12-6.

Small Fruits. Results obtained from small bush fruits, also strawberries and raspberries, were wonderfully encouraging. Currants of all kinds, also gooseberries, stand climatic conditions well and produce fruit of excellent quality. In strawberries, the Senator Dunlap and Williams again proved their superiority. Raspberries commenced bearing August 5th and continued ripening fruit until September 12th. Strawberries fruited from July 8th to August 3rd.

Landscape and Horticultural Work. Believing that the farm should help lead the way in this work in the north, plans are being worked out whereby more time will be spent on this work in the future than has been done in the past. Little or no attention has been given to flowers because of the fact that the labour was not available and time did not permit. Home beautification must be regarded as a most important line of work and the results obtained from work of this kind cannot be estimated in dollars and cents.

SUMMARY

The distribution of pure bred live stock, sheep club work, field crop demonstrations, the testing of new varieties of cereals, demonstrations with early maturing varieties of grain crops, summer fallowing and the production of fall wheat, stand out as some of the main features of the work of the Farm during the year. Parasitic control in sheep and horses, by following well recognized forms of treatment gave outstanding results, the use of bacterin for the control of hemorrhagic septicemia in cattle and sheep is also apparently giving results.

A check on the quality of the wool from the flock of pure bred Shropshire sheep, accomplished in co-operation with the Live Stock Branch, Ottawa, and the Co-operative Wool Growers, rates the farm flock well up to the standard for the breed. The Farm believing in the necessity for an increased sheep flock population in the district and other parts of the north, has given the flock special attention in order to keep up this standard and make the flock something worthwhile.

The dairy herd carrying quite a percentage of young cows, did very well throughout the year.

Fertilizer experiments have been carried on for several years and from results obtained it would appear that more experiments are necessary and a closer check on soil conditions and other requirements in the district is also necessary.

Poultry extension work should be receiving more attention with special reference to housing, care and feeding, light, temperature control tests, parasites and other things influencing production.

The general advancement in clay belt agriculture with changing conditions and environment bring up new problems in farm management, cultural methods, crops, live stock and marketing, all of which the Farm must recognize and assist in solving.

The stablizing of varieties suitable to climatic conditions, grading and co-operative marketing appear as essentials in helping improve economic conditions.

RIDGETOWN DEMONSTRATION FARM

The seeding operations on the lighter and drier soils commenced in late March but were not completed until May 1st. The greater part of April was wet and cold, which made the spring sowing very difficult and was responsible for the large acreage of late and light crops of oats. The early sown crops were very good.

May was cold and backward and, except on well-drained land, cultivation was difficult. Heavy thunderstorms were prevalent during late June and July and did much damage in some sections of the district. August and the most of September were very dry but during October there was sufficient to supply the wells and make plowing easy.

Rainfall during the growing season:

April	6.54	inches
May	2.35	"
June	4.51	"
July	2.66	"
August	.38	"
September	1.99	"
October	4.55	"
Total	22.98	"

A heavy thunderstorm on June 19th did much damage in an area eight miles long and two miles wide; the Experimental Farm was in this area.

Frost caught some of the late tobacco.

FARM CROPS

The cereal crops were very good.

The bean crop was disappointing; the heavy rain in June, which came in two hours, scalded some and retarded the growth of a large percentage of the balance. The conditions were ideal for the development and spread of disease but the crop was clean, which demonstrates very definitely that the continuous use of clean seed will largely overcome anthracnose. Under this condition there is no contamination through the disease being carried over in the soil. An uneven crop, however, does not turn out as satisfactory a sample as is found in a good crop—there are more coloured and immature beans:

	Bushels	Acres	Bushels per acre
Wheat	1.050	30	35
Oats	1,250	20	62.5
Barley	585	13	45
Beans	432	27	16

Hay was an average crop.

The corn crop promised well but upon husking too great an amount of soft corn was found. The silage crop was good.

Tobacco was light due to the continued dry weather through August.

SEED

The demand for seed is far beyond the supply. The wheat was all spoken for before harvest time. The 1929 crop of beans were sold before threshing time.

Oats and barley were ordered during the fall for 1930 sowing. Some wheat for September, 1930, was ordered during August, 1929.

The Robust bean introduced and distributed from the Farm now constitutes nearly 100 per cent. of the white beans grown in Kent County. Yields have been raised and damage from disease has been very largely reduced. Growers and buyers are well satisfied.

LIVE STOCK

The health of the live stock has been particularly good—only one slight case of parasite trouble developed. The brood sows are treated immediately previous to farrowing in the spring and they are placed in disinfected colony houses and hurdled on land where pigs are not generally kept.

The demand for breeding sows has been normal during the fall months but was very brisk earlier in the season.

One Yorkshire boar and two young sows were purchased at the College sale.

One of the older teams of horses was sold during the winter and replaced by a young team of grade Percherons.

Two hundred and fifty Barred Rock laying hens were trapped and sixty of these have a record of over two hundred eggs and ten of these laid over two hundred and fifty per hen during the year.

The demand for hatching eggs from tested flocks is increasing rapidly—every purchaser is aware of the dangers from indiscriminate buying. Five hundred and twenty-eight dozens of eggs were sold for hatching. One hundred cockerels were sold for breeding purposes.

EXTENSION WORK

The usual number of general public meetings and committee meetings were attended. Many calls *re* swine and poultry diseases were cared for—in some cases visits to the farms were necessary. Considerable time is necessary to meet the general demand regarding practical operations.

Considerable time was given to the production of sugar beets, tomatoes and cabbage.

The Ten Ton Tomato Club was carried on again in conjunction with Libby, McNeill and Libby. This project has up-to-date had a real stimulating effect on the production of larger yields of high quality tomatoes.

SOME EXPERIMENTS

Potatoes.—An experiment was conducted to see the effect of spraying and dusting on late potatoes. Potatoes (Green Mountain) were planted on June 8th and the first spraying and dusting was done on July 2nd, when plants were four to six inches high. Five applications of both spray and dust were made at intervals of one to two weeks, the last being made on August 10th. The weather during August and September was very dry and, by the end of the first week of September, the leaves on the unsprayed plants were so badly affected with tipburn, etc., that the tops were brown and practically dead, whereas the tops on the sprayed and dusted plants were quite green. A power sprayer was used for the Bordeaux spray and a hand duster for applying the dust. If a power duster had been used results would likely have been better on dusted plot.

Treatment	Yield per acre	
	Large	Small
Sprayed	234 bush.	39 bush.
Dusted	193 "	35 "
Check	156 "	29 "

Arsenate of lime (calcium arsenate) was used twice on all plots to control potato beetles. Copotex was used twice as poison on dusted plots.

Celery.—Two different experiments (one on Early Celery and one on Late Celery) were started using Bordeaux mixture and dust as a check for celery blight. After five applications of spray and six applications of dust on the early celery the experiment was discontinued as no blight had developed. After five applications of spray and dust on the late celery the experiment was discontinued for the same reason. The very dry weather, no doubt, had considerable effect on the development of the blight.

Raspberries.—Some of the best raspberry plantations in the two counties were again examined but on account of Leaf Curl, Mosaic and Anthracnose, none were fit for certified stock except one plantation, which has been producing certified stock for three or four years.

Apple Orchard Spraying.—During the earlier part of the summer much time was spent among the apple orchard men. Circular letters were sent out through the Agricultural Representatives in Essex and Kent and personal visits were made as often as possible.

Greenhouse growers were visited frequently and any troubles that had arisen were then discussed. As most of the larger greenhouses are now equipped with tile and soil sterilized in this manner many of the troubles arising a few years ago have been eliminated. Farmers, fruit growers and market gardeners were visited as often as time would permit and various problems were discussed during these visits.

SUGAR BEETS

Previous experiments were conducted to ascertain the best fertilizer mixture for beets. A 2-12-6 gave best results. An effort now is under way to determine the most economical amount per acre to apply.

Rotations are considered of importance in all agricultural practice. Last spring two plots of land, one at Chatham on the property of the Dominion Sugar Company and the other on our Experiment Farm, were set aside and divided into plots with the idea of ascertaining the value of the Sugar Beet in our general rotations. Results cannot be expected for many years.

The rotations common in the Sugar Beet area are in use.

FERTILIZER EXPERIMENT ON SUGAR BEETS AT EXPERIMENTAL FARM, RIDGETOWN, 1929

Plot No.	Fertilizer Analysis	Yield per acre		Sugar per cent.	Purity per cent.	Increase over check per acre		Value of yield per acre	Increased value over check per acre	Gain per acre after deducting cost of fertilizer
		tons	lbs.			tons	lbs.			
1	2-12-6 at 100 lbs. per acre....	9	600	19.0	92.8	.....	.....	$79.05	....	....
2	2-12-6 at 200 lbs per acre....	11	500	19.6	93.0	.....	.....	99.00	$1.13	....
3	2-12-6 at 300 lbs. per acre....	12	600	19.4	94.0	1	100	107.01	9.14	$2.92
4	2-12-6 at 400 lbs. per acre....	13	1,300	20.1	93.0	2	800	123.53	25.66	17.36
5	2-12-6 at 500 lbs. per acre.....	12	1,800	20.2	93.7	1	1,300	117.39	19.52	9.15
6	2-12-6 at 600 lbs. per acre....	12	.....	19.0	92.7	.....	1,500	102.00	4.13	....
7	2-12-6 at 700 lbs. per acre....	13	100	18.9	92.6	1	1,600	110.27	12.40	....
8	2-12-6 at 800 lbs. per acre....	14	1,400	19.0	92.1	3	900	124.95	27.08	10.48
Check..	No fert....	11	500	19.4	92.2	.....	.....	97.87	....	....

Note: The results on sugar beets are based on prices paid by the factory when the price of sugar is $6.00 wholesale.

RESULT OF FERTILIZER EXPERIMENT ON SUGAR BEETS AT EXPERIMENTAL FARM, RIDGETOWN, 1929

Fertilizer analysis	Yield per acre		Sugar per cent.	Purity per cent.	Increase over check per acre		Value of yield per acre	Increased value over check per acre	Gain per acre after deducting cost of fertilizer
	tons	lbs.			tons	lbs.			
2-12-6 at 400 lbs. per acre using Muriate of Potash	14	1,250	20.3	91.4	2	950	$133.81	$28.72	$20.42
2-12-6 at 400 lbs. acre, using Carbonate of Potash.	12	1,500	20.0	94.1	.....	1,200	114.75	9.66	1.36
2-12-6 at 400 lbs. per acre using Sulphate of Potash.............	13	1,000	19.9	93.4	1	700	120.82	15.73	7.19
No fertilizer.......	12	300	19.3	92.5	.....	.....	105.09	....	....

Result of Fertilizer Experiment on Sugar Beets at Dominion Sugar Co., Chatham, 1929

Plot No.	Fertilizer Analysis	Yield per acre		Sugar per cent.	Purity per cent.	Increase over check per acre		Value of yield per acre	Increased value over check per acre	Gain per acre after deducting cost of fertilizer
		tons	lbs.			tons	lbs.			
1	2-12-6 at 100 lbs. per acre....	16	550	17.5	89.3	2	350	$126.13	$25.32	$23.26
2	2-12-6 at 200 lbs. per acre....	16	1,300	15.5	89.3	2	1,100	112.38	11.57	7.42
3	2-12-6 at 300 lbs. per acre....	17	950	16.6	89.8	3	750	127.56	26.85	20.63
4	2-12-6 at 400 lbs. per acre....	17	500	14.9	85.4	3	300	111.26	10.45	2.15
5	2-12-6 at 500 lbs. per acre....	18	.....	15.9	90.0	3	1,800	125.10	24.29	13.92
6	2-12-6 at 600 lbs. per acre....	18	300	16.3	87.9	4	100	129.77	28.96	16.51
7	2-12-6 at 700 lbs. per acre....	17	1,700	16.1	90.7	3	1,500	125.84	25.03	10.51
8	2-12-6 at 800 lbs. per acre....	18	1,500	17.3	89.5	4	1,300	143.43	42.62	26.02
Check..	No fert....	14	200	16.3	88.6	.....	.....	100.81	....	....

Fertilizer Experiment on Sugar Beets on farm of Robert Grant, Dover Township, 1929

Plot No.	Fertilizer Analysis	Yield per acre		Sugar per cent.	Purity per cent.	Increase over check per acre		Value of yield per acre	Increased value over check per acre	Gain per acre after deducting cost of fertilizer
		tons	lbs.			tons	lbs.			
1	2-12-6 at 100 lbs. per acre....	9	300	20.3	90.8	.....	300	$83.72	$11.72	$9.65
2	2-12-6 at 200 lbs. per acre....	10	1,900	20.2	92.5	1	1,900	99.64	27.64	23.49
3	2-12-6 at 300 lbs. per acre....	9	800	19.7	92.0	.....	800	83.19	11.19	4.97
4	2-12-6 at 400 lbs. per acre....	10	1,600	19.0	92.8	1	1,600	91.80	19.80	11.50
5	2-12-6 at 500 lbs. per acre....	11	1,700	20.8	93.0	2	1,700	111.39	39.39	29.02
6	2-12-6 at 600 lbs. per acre....	12	.....	19.1	92.9	3	.....	102.60	30.60	18.15
7	2-12-6 at 700 lbs. per acre....	10	1,900	19.4	94.0	1	1,900	95.26	23.26	8.74
8	2-12-6 at 800 lbs. per acre....	11	500	19.7	93.1	2	500	99.56	27.56	10.96
Check..	No fert....	9	.....	18.0	93.8	.....	.....	72.00	....	....

Fertilizer Experiment on Sugar Beets on Farm of Stanley Clements, Dover Township, 1929

Plot No.	Fertilizer Analysis	Yield per acre		Sugar per cent.	Purity per cent.	Increase over check per acre		Value of yield per acre	Increased value over check per acre	Gain per acre after deducting cost of fertilizer
		tons	lbs.			tons	lbs.			
1	2-12-6 at 100 lbs. per acre....	10	1,000	18.4	87.3	1	.....	$86.10	$12.48	$10.41
2	2-12-6 at 200 lbs. per acre....	10	400	17.8	91.1	.....	1,400	79.56	5.94	1.79
3	2-12-6 at 300 lbs. per acre....	10	700	18.6	90.9	.....	1,700	85.90	12.28	6.06
4	2-12-6 at 400 lbs. per acre....	10	1,900	18.3	91.6	1	900	89.24	15.62	7.32
5	2-12-6 at 500 lbs. per acre....	10	1,000	17.7	90.5	1	.....	82.42	8.80	....
6	2-12-6 at 600 lbs. per acre....	11	1,700	18.4	93.3	2	700	97.17	23.55	11.10
7	2-12-6 at 700 lbs. per acre....	11	200	18.1	93.0	1	1,200	89.35	15.73	1.21
8	2-12-6 at 800 lbs. per acre....	9	1,800	18.8	91.5	.....	800	83.16	9.54	....
Check..	No fert....	9	1,000	17.5	93.2	.....	.....	73.62	....	....

Fertilizer Experiment on Sugar Beets on Farm of James Hughes, Northwood, 1929

Plot No.	Fertilizer Analysis	Yield per acre		Sugar per cent.	Purity per cent.	Increase over check per acre		Value of yield per acre	Increased value over check per acre	Gain per acre after deducting cost of fertilizer
		tons	lbs.			tons	lbs.			
1	2-12-6 at 100 lbs. per acre....	10	1,300	18.3	87.1	1	700	$86.79	$7.74	$5.67
2	2-12-6 at 200 lbs. per acre....	9	1,800	19.0	89.6	.....	1,200	84.15	5.10	.95
3	2-12-6 at 300 lbs. per acre....	11	1,700	17.7	87.2	2	1,100	93.02	13.97	7.75
4	2-12-6 at 400 lbs. per acre....	10	1,900	18.7	88.9	1	1,300	91.43	12.38	4.08
5	2-12-6 at 500 lbs. per acre....	12	300	19.5	89.6	2	1,700	106.31	27.26	16.89
6	2-12-6 at 600 lbs. per acre....	10	1,900	19.0	88.2	1	1,300	93.07	14.02	1.57
7	2-12-6 at 700 lbs. per acre....	11	1,100	17.9	89.3	2	500	91.82	12.77	....
8	2-12-6 at 800 lbs. per acre....	12	.....	18.9	90.2	2	1,400	101.40	22.35	5.70
Check..	No fert....	9	600	19.0	90.3	.....	.....	79.05	....	....

Fertilizer Experiment on Sugar Beets on Farm of John Workman, Essex, 1929

Plot No.	Fertilizer Analysis	Yield per acre		Sugar per cent.	Purity per cent.	Increase over check per acre		Value of yield per acre	Increased value over check per acre	Gain per acre after deducting cost of fertilizer
		tons	lbs.			tons	lbs.			
1	2-12-6 at 100 lbs. per acre....	12	300	15.8	91.3	1	1,900	$83.83	$7.33	$5.36
2	2-12-6 at 200 lbs. per acre....	12	.....	16.3	91.2	1	1,600	85.80	9.30	5.15
3	2-12-6 at 300 lbs. per acre....	11	1,700	17.2	91.6	1	1,300	90.06	13.56	7.34
4	2-12-6 at 400 lbs. per acre....	12	900	16.7	92.4	2	500	91.50	15.00	6.70
5	2-12-6 at 500 lbs. per acre....	12	600	17.1	90.6	2	200	92.86	16.36	5.99
6	2-12-6 at 600 lbs. per acre....	12	900	17.5	91.7	2	500	96.48	19.98	7.53
7	2-12-6 at 700 lbs. per acre....	12	.....	16.5	91.8	1	1,600	87.00	10.50	....
8	2-12-6 at 800 lbs. per acre....	12	1,500	16.1	91.7	2	1,100	89.88	13.38	....
Check..	No fert....	10	400	17.0	90.3	.....	.....	76.50	....	....

Result of Fertilizer Experiment on Sugar Beets on Farm of Frank Bird, Tupperville, 1929

Plot No.	Fertilizer Analysis	Yield per acre		Sugar per cent.	Purity per cent.	Increase in yield over check per acre		Value of yield per acre	Increased value over check per acre	Gain per acre after deducting cost of fertilizer
		tons	lbs.			tons	lbs.			
1	2-12-6 at 100 lbs. per acre....	12	1,800	17.1	90.1	1	1,300	$97.39	$7.96	$5.89
2	2-12-6 at 200 lbs. per acre....	12	900	17.7	90.0	1	400	97.73	8.30	4.15
3	2-12-6 at 300 lbs. per acre....	13	400	18.3	89.6	1	1,900	107.58	18.15	11.93
4	2-12-6 at 400 lbs. per acre....	14	500	19.0	91.1	3	.....	121.12	31.69	23.39
5	2-12-6 at 500 lbs. per acre....	12	300	18.1	92.8	.....	1,800	97.80	8.37	....
6	2-12-6 at 600 lbs. per acre....	12	900	17.8	92.6	1	400	98.35	8.92	....
7	2-12-6 at 700 lbs. per acre....	13	400	18.3	93.3	1	1,900	107.58	18.15	2.26
8	2-12-6 at 800 lbs. per acre....	13	1,000	18.2	92.1	2	500	109.35	19.92	3.32
Check..	No fert....	11	500	17.9	93.2	.....	.....	89.43	....	....

RESULT OF FERTILIZER EXPERIMENT ON SUGAR BEETS ON FARM OF JOHN WATERSCHOOT, WALLACEBURG, 1929

Plot No.	Fertilizer Analysis	Yield per acre		Sugar per cent.	Purity per cent.	Increase in yield per acre over check		Value of yield per acre	Increased value over check per acre	Gain per acre after deducting cost of fertilizer
		tons	lbs.			tons	lbs.			
1	2-12-6 at 100 lbs. per acre....	10	1,600	17.6	87.2	1	100	$84.24	$11.61	$9.54
2	2-12-6 at 200 lbs. per acre....	11	500	18.2	91.9	1	1,000	91.12	18.49	14.34
3	2-12-6 at 300 lbs. per acre....	12	.....	18.1	90.6	2	500	96.60	23.97	17.75
4	2-12-6 at 400 lbs. per acre....	12	1,500	17.9	89.3	3	.....	101.36	28.73	20.43
5	2-12-6 at 500 lbs. per acre....	13	100	17.8	90.8	3	600	103.09	30.46	20.09
6	2-12-6 at 600 lbs. per acre....	13	1,300	18.1	92.1	3	1,800	109.88	37.25	24.80
7	2-12-6 at 700 lbs. per acre.....	13	700	18.0	93.0	3	1,200	106.80	34.17	19.65
8	2-12-6 at 800 lbs. per acre....	12	1,200	18.3	92.0	2	1,700	102.69	30.06	13.46
Check..	No fert....	9	1,500	16.9	90.8	.....	.....	72.63	....	....

RESULT OF FERTILIZER EXPERIMENT ON SUGAR BEETS AT DOMINION SUGAR CO., CHATHAM, 1929

Fertilizer analysis	Yield per acre		Sugar per cent.	Purity per cent.	Increase over check per acre		Value of yield per acre	Increased value over check per acre	Gain per acre after deducting cost of fertilizer
	tons	lbs.			tons	lbs.			
2-12-2 at 400 lbs. per acre........	15	600	15.4	87.9	2	500	$102.51	$11.16	$3.41
2-12-4 at 400 lbs. per acre............	16	1,600	15.7	86.9	3	1,500	115.08	23.73	15.68
2-12-6 at 400 lbs. per acre........	17	350	17.4	91.0	4	250	132.24	40.89	32.59
2-12-8 at 400 lbs. per acre........	16	1,900	18.1	88.6	3	1,800	136.44	45.09	36.49
2-12-10 at 400 lbs. per acre........	17	1,400	16.8	88.7	4	1,300	130.98	39.63	30.43
No fertilizer.......	13	100	16.0	89.4	.....	.....	91.35	....	....

RESULT OF FERTILIZER EXPERIMENT ON SUGAR BEETS AT DOMINION SUGAR CO., CHATHAM, 1929

Fertilizer analysis	Yield per acre		Sugar per cent.	Purity per cent.	Increase over check per acre		Value of yield per acre	Increased value over check per acre	Gain per acre after deducting cost of fertilizer
	tons	lbs.			tons	lbs.			
2-12-6 at 400 lbs. per acre using Muriate of Potash	16	1,950	16.0	86.8	3	800	$118.82	$23.80	$15.50
2-12-6 at 400 lbs. per acre using Sulphate of Potash	18	600	16.7	88.7	4	1,450	134.50	39.48	30.94
2-12-6 at 400 lbs. per acre using Carbonate of Potash	18	150	17.2	88.1	4	1,000	137.37	42.35	34.05
No fertilizer	13	1,150	16.0	89.4	.....	.....	95.02	....	....

SUGAR BEET THINNING EXPERIMENT, 1929

Distance of thinning	Yield per acre		Sugar Per cent.	Purity Per cent.
	tons	lbs.		
9 inches apart	12	1,350	15.8	90.0
12 inches apart	13	700	17.0	91.0
15 inches apart	13	400	17.6	90.9
18 inches apart	12	750	17.2	92.8
21 inches apart	10	250	17.1	90.1

The above is a continuation of work carried from 1928.

Considerable controversy arises occasionally, and especially at thinning time, as to which is the more valuable at the time of thinning—the large or the small seedling plant. In order to test this, two plots of beets were carefully thinned and in one only large plants and, in the other, only small plants are left standing, twelve inches apart in both cases:

	Yield per acre		Sugar per cent.	Purity per cent.
	Tons	lbs.		
Large seedling plants left standing	9	900	16.7	90.6
Small seedling plants left standing	5	500	16.8	90.7

FERTILIZER TESTS WITH CABBAGE

Libby, McNeill and Libby, of Chatham, contract with growers for cabbage for kraut purposes. In some cases disease gave some trouble, and assistance was given from this point. No definite ideas had been formed as to the kind and amount of fertilizer that should be used for best results and in co-operation with the field men from the company a series of experiments have been commenced and will be carried on for five years and perhaps longer.

RESULT OF FERTILIZER EXPERIMENT ON LATE CABBAGE AT W. R. COLTART, KENT CENTRE, ONT.

Fertilizers applied at rate of 500 pounds per acre

Plot number	Fertilizer analysis	Yield per acre marketable		Increase over check per acre		Value of increase	Cost of fertilizer
		tons	lbs.	tons	tons		
1......................	2-8-6	9	1,000	2	1,200	$15 60	$9 50
2......................	4-8-6	9	950	2	1,150	15 45	11 25
3......................	6-8-6	9	1,100	2	1,300	15 90	12 75
4......................	4-10-6	8	1,100	1	1,300	9 90	11 56
5......................	4-12-6	10	1,000	3	1,200	21 60	11 87
6......................	4-8-4	10	750	3	950	20 85	10 56
7......................	4-8-8	10	900	3	1,100	21 30	11 62
Check..................	No fert...	6	1,800	....	....	......	......

NOTE:—The results on cabbage are based on price paid by the factory—($6.00 per ton).

RESULT OF FERTILIZER EXPERIMENT ON LATE CABBAGE AT W. R. COLTART, KENT CENTRE, 1929

Fertilizer applied at rate of 500 pounds per acre

Fertilizer analysis	No. of marketable heads per acre	Weight of marketable heads per acre		No. of green split heads per acre	Weight of of green split heads per acre	No. of small immature heads per acre	Weight of small immature heads per acre
		tons	lbs.		lbs.		lbs.
2-8-6.............	6,500	9	1,000	100	400	1,400	900
4-8-6.............	6,650	9	950	150	650	1,200	700
6-8-6.............	7,150	9	1,100	....	....	850	600
4-10-6............	6,800	8	1,100	....	....	1,200	750
4-12-6............	7,300	10	1,000	50	300	650	400
4-8-4.............	7,300	10	750	....	....	700	400
4-8-8.............	6,950	10	900	50	300	1,000	650
No fertilizer.......	5,900	6	1,800	....	....	2,100	1,150

RESULT OF FERTILIZER EXPERIMENT ON LATE CABBAGE AT D. HOUSTON, KENT CENTRE, 1929

Fertilizer applied at rate of 500 pounds per acre

Plot No.	Fertilizer analysis	Marketable yield per acre		Increase over check per acre		Value of increase	Cost of fertilizer
		tons	lbs.	tons	lbs.		
1	2-8-6..................	16	1,650	4	700	$26 10	$9 50
2	4-8-6..................	17	1,150	5	200	30 60	11 25
3	6-8-6..................	17	400	4	1,450	28 35	12 75
4	4-10-6.................	17	200	4	1,250	27 75	11 56
5	4-12-6.................	19	1,500	7	550	43 65	11 87
6	4-8-4..................	17	750	4	1,800	29 40	10 56
7	4-8-8..................	17	650	4	1,700	29 10	11 62
Check..	No fertilizer...............	12	950	....	....	......	......

RESULT OF FERTILIZER EXPERIMENT ON LATE CABBAGE AT D. HOUSTON, KENT CENTRE, 1929

Fertilizer applied at the rate of 500 pounds per acre

Fertilizer analysis	No. of heads market-able per acre	Weight of heads marketable per acre		No. of Rotted heads per acre	Weight of rotted heads per acre	No. green split heads per acre	Weight green split heads per acre	No. small immature heads per acre	Weight of small immature heads per acre
		tons	lbs.		lbs.		lbs.		lbs.
2-8-6....	8,000	16	1,650	300	1,100	200	750	500	700
4-8-6....	8,300	17	1,150	200	900	...	...	500	800
6-8-6....	8,600	17	400	200	650	...	...	200	200
4-10-6...	8,800	17	200	...	....	...	...	200	300
4-12-6...	8,750	19	1,500	...	....	...	...	250	300
4-8-4....	8,500	17	750	...	....	50	350	450	450
4-8-8....	8,550	17	650	150	550	...	...	300	300
No fert...	7,900	12	950	100	300	...	...	1,000	1,000

RESULT OF FERTILIZER EXPERIMENT ON LATE CABBAGE AT R. SNOBELEN, KENT CENTRE, 1929

Fertilizers applied at rate of 500 pounds per acre

Plot No.	Fertilizer analysis	Yield per acre marketable		Increase over check per acre		Value of increase	Cost of fertilizer
		tons	lbs.	tons	lbs.		
1	2-8-6....................	10	1,600	2	500	$13 50	$9 50
2	4-8-6....................	10	700	1	1,600	10 80	11 25
3	6-8-6....................	11	200	2	1,100	15 30	12 75
4	4-10-6...................	10	1,450	2	350	13 05	11 56
5	4-12-6...................	10	400	1	1,300	9 90	11 87
6	4-8-4....................	10	175	1	1,075	9 22	10 56
7	4-8-8....................	12	450	3	1,350	22 05	11 62
Check..	No fertilizer..............	8	1,100	..	.....	......	......

RESULT OF FERTILIZER EXPERIMENT ON LATE CABBAGE AT R. SNOBELEN, KENT CENTRE, 1929

Fertilizers applied at rate of 500 pounds per acre

Fertilizer Analysis	No. of market-able heads per acre	Weight of market-able heads per acre		No. of green split heads per acre	Weight of green split heads per acre	No. of small immature heads per acre	Weight of small immature heads per acre
		tons	lbs.		lbs.		lbs.
2-8-6....................	6,900	10	1,600	75	150	1,125	750
4-8-6....................	7,275	10	700	75	300	750	450
6-8-6....................	7,650	11	200	150	300	300	225
4-10-6...................	7,650	10	1,450	....	....	450	300
4-12-6...................	7,350	10	400	225	450	525	375
4-8-4....................	7,350	10	175	150	600	600	450
4-8-8....................	7,800	12	450	....	....	300	150
No fertilizer..............	6,525	8	1,100	....	....	1,575	1,275

RESULT OF FERTILIZER EXPERIMENT ON LATE CABBAGE AT EARL BOLTON, KENT CENTRE, 1929

Fertilizers applied at rate of 500 pounds per acre

Plot No.	Fertilizer analysis	Yield per acre marketable		Incresae over check per acre		Value of increase	Cost of fertilizer
		tons	lbs.	tons	lbs.		
1	2-8-6	5	1,900	....	....	......	$9 50
2	4-8-6	7	.....	....	1,150	$3 45	11 25
3	6-8-6	9	150	2	1,300	15 90	12 75
4	4-10-6	9	.....	2	1,150	15 45	11 56
5	4-12-6	8	1,700	2	850	14 55	11 87
6	4-8-4	8	700	1	1,850	11 55	10 56
7	4-8-8	7	1,750	1	900	8 70	11 62
Check..	No fertilizer	6	850	....	....	......	......

RESULT OF FERTILIZER EXPERIMENT ON LATE CABBAGE AT EARL BOLTON'S, KENT CENTRE, 1929

Fertilizer applied at rate of 500 lbs. per acre

Fertilizer analysis	No. of marketable heads per acre	Weight of marketable heads per acre		No. of green split heads per acre	Weight of green split heads per acre	No. of small immature heads per acre	Weight of small immature heads per acre
		tons	lbs.		lbs.		lbs.
2-8-6	6,000	5	1,900	....	....	3,000	1,750
4-8-6	6,350	7	....	150	500	2,500	1,600
6-8-6	7,700	9	150	....	....	1,300	850
4-10-6	7,300	9	....	50	150	1,650	1,050
4-12-6	7,550	8	1,700	50	350	1,400	1,050
4-8-4	7,550	8	700	....	....	1,450	950
4-8-8	6,900	7	1,750	50	150	2,050	1,500
No fertilizer	6,400	6	850	....	....	2,600	1,750

RESULT OF FERTILIZER EXPERIMENT ON LATE CABBAGE AT JOHN SNOBELEN, KENT CENTRE, 1929

Fertilizers applied at rate of 500 pounds per acre

Plot No.	Fertilizer analysis	Yield per acre marketable		Increase over check per acre		Value of increase	Cost of fertilizer
		tons	lbs.	tons	lbs.		
1	2-8-6	16	1,700	3	450	$19 35	$9 50
2	4-8-6	17	1,350	4	100	24 30	11 25
3	6-8-6	22	1,600	9	350	55 05	12 75
4	4-10-6	23	1,800	10	550	61 65	11 56
5	4-12-6	22	400	8	1,150	51 45	11 87
6	4-8-4	14	850	..	1,600	4 80	10 56
7	4-8-8	18	100	4	850	26 55	11 62
Check..	No fertilizer	13	1,250	..	.....	......	......

RESULT OF FERTILIZER EXPERIMENT ON LATE CABBAGE AT JOHN SNOBELEN'S, KENT CENTRE, 1929

Fertilizers applied at rate of 500 pounds per acre

Fertilizer analysis	No. of marketable heads per acre	Weight of marketable heads per acre		No. of green split heads per acre	Weight of green split heads per acre	No. of small immature heads per acre	Weight of small immature heads per acre
		tons	lbs.		lbs.		lbs.
2-8-6	7,850	16	1,700	50	350	100	100
4-8-6	7,450	17	1,350	100	700	450	500
6-8-6	7,750	22	1,600	...	...	250	350
4-10-6	7,850	23	1,800	50	250	100	150
4-12-6	7,500	22	400	...	...	500	600
4-8-4	7,700	14	850	...	...	300	400
4-8-8	7,700	18	100	50	350	250	250
No fertilizer	7,100	13	1,250	50	150	850	800

RESULT OF FERTILIZER EXPERIMENT ON CORN AT EXPERIMENTAL FARM, RIDGETOWN, 1929

Fertilizer applied at rate of 200 pounds per acre

Plot No.	Fertilizer analysis	Yield per plot		Yield per acre		Total yield per acres
		Hard corn	Soft corn	Hard corn	Soft corn	
		lbs.	lbs.	lbs.	lbs.	lbs.
1	0-12-6	67	74½	1,985.3	2,207.6	4,192.9
2	2-10-6	69½	67	2,059.4	1,985.3	4,044.7
3	2-8-6	71	62	2,103.9	1,837.2	3,941.1
4	2-12-4	72	68½	2,133.5	2,029.8	4,163.3
5	2-12-6	62	67	1,837.2	1,985.3	3,822.5
6	2-12-8	74	56	2,192.8	1,659.2	3,852.0
7	4-12-6	66	65	1,955.7	1,926.1	3,881.8
8	6-12-6	63½	61½	1,881.6	1,822.4	3,704.0
Check	No fertilizer	58	71	1,718.7	2,103.9	3,822.6

RESULT OF 2-12-6 EXPERIMENTS ON CORN—DIFFERENT RATES OF APPLICATION AND DIFFERENT DATES OF PLANTING

First planting, May 25th, 1929

Application per acre (pounds)	Yield per plot		Yield per acre		Total
	Hard corn	Soft corn	Hard corn	Soft corn	
	lbs.	lbs.	lbs.	lbs.	lbs.
200	85	14	3,526.3	580.8	4,107.1
400	67	11	2,779.5	456.3	3,235.8
600	56	8	2,323.2	331.8	2,655.0
None	54	18½	2,240.2	767.4	3,007.6

Second planting, June 4th, 1929

200	65	35	2,696.5	1,452.0	4,148.5
400	47	31	1,949.8	1,286.0	3,235.8
600	36	22	1,494.9	912.7	2,407.6
None	53	28	2,198.7	1,161.6	3,360.3

RESULT OF FERTILIZER EXPERIMENT ON BEANS AT EXPERIMENTAL FARM, RIDGETOWN, 1929

Fertilizer applied at rate of 100 pounds per acre

Plot No.	Fertilizer analysis	Yield per acre		Increase over check per acre		Value of increase	Cost of fertilizer
		bus.	lbs.	bus.	lbs.		
1	0-16-0	16	15				$1 00
2	0-12-4	16	15				1 60
3	0-10-4	15	37½				1 53
4	0-8-4	15	37½				1 44
5	0-6-4	15	37½				1 34
6	2-12-4	16	15				2 01
7	4-12-4	16	52½		37½	$1 87	2 30
8	6-12-4	17	30	1	15	3 75	2 60
9	4-8-4	18	26¼	2	11¼	6 56	2 11
10	2-12-0	18	26¼	2	11¼	6 56	1 86
11	2-12-2	16	52½		37½	1 87	1 94
12	2-12-6	17	30	1	15	3 75	2 08
13	2-12-8	18	26¼	2	11¼	6 56	2 15
14	2-10-4	17	30	1	15	3 75	1 93
15	2-8-4	16	52½		37½	1 87	1 83
Check	No fertilizer	16	15				

NOTE:—The results on beans are based on average market prices ($3.00 per bushel).

RESULT OF 2-12-2 FERTILIZER TEST ON BEANS AT EXPERIMENTAL FARM, RIDGETOWN, 1929

To ascertain most economical rate of application per acre

Rate of application per acre (pounds)	Yield per acre		Increase over check per acre		Value of yield per acre	Value of increase over check per acre	Cost of fertilizer
	bus.	lbs.	bus.	lbs.			
50	15	37½			$46 87		$0 97
100	17	30	1	15	52 50	$3 75	1 94
150	16	15			48 75		2 91
200	17	30	1	15	52 50	3 75	3 88
None	16	15			48 75		

RESULT OF FERTILIZER TEST ON BEANS AT EXPERIMENTAL FARM, RIDGETOWN, 1929

Fertilizer used 2-12-5 at 80 pounds per acre sown with drill
Yield per acre—with fertilizer—16 bushels, 43 pounds — Test No. 1
Yield per acre—without fertilizer—17 bushels, 54 pounds

Fertilizer used 2-12-5 at 80 pounds per acre sown with drill
Yield per acre—with fertilizer—17 bushels, 13 pounds — Test No. 2
Yield per acre—without fertilizer—17 bushels

The above test was made because considerable criticism has been levelled at the Farm *re* the fertilization of field beans.

The amount sown by the drill is, perhaps, too small but under the moisture conditions should have given some results.

This experiment will be carried on for several years with a variation in the amounts of fertilizer used per acre.

The value of such a test lies in the method of application; the fertilizer is applied by the same method as used by farmers.

RESULT OF FERTILIZER EXPERIMENT ON EARLY POTATOES OF RIDGETOWN, 1929

Fertilizers applied at rate of 600 pounds per acre

Plot No.	Fertilizer analysis	Yield per acre	Increase over check per acre	Value of increase	Cost of fertilizer
		bags	bags		
1	0-16-0	76.6	10	$15 00	$6 00
2	0-12-4	72.2	5.6	8 40	9 60
3	0-10-4	77.2	10.6	16 40	9 15
4	0-8-4	78.3	11.7	17 55	8 63
5	0-6-4	77.2	10.6	16 40	8 03
6	2-12-4	86.6	20	20 00	12 08
7	4-12-4	91.1	24.5	36 75	13 80
8	6-12-4	92.7	26.1	39.05	15 60
9	4-8-4	85	18.4	27.60	12.68
10	2-12-0	81.6	15	22 50	11 18
11	2-12-2	76.6	10	15 00	11 63
12	2-12-6	81.1	14.5	21 75	12 45
13	2-12-8	81.1	14.5	21 75	12 90
14	2-10-4	76.6	10	15 00	11 55
15	2-8-4	77.7	11.1	16.65	10 95
Check		66.6	.....	.....	.....

NOTE:—The results on early potatoes are based on average market prices ($1.50 per bag of 90 pounds).

RESULT OF 2-12-6 FERTILIZER TEST ON EARLY POTATOES AT EXPERIMENTAL FARM, RIDGETOWN, 1929

To ascertain most economical rate of application per acre

Rate of application per acre (pounds)	Yield per acre	Increase over check per acre	Value of yield per acre	Value of increase over check per acre	Cost of fertilizer
	bags	bags			
200	66.6	2.2	$99 90	$3 30	$4 15
300	68.8	4.4	103 20	6 60	6 23
400	77.7	13.3	116 55	19 95	8 30
500	76.6	12.2	114 90	18 30	10 38
600	77.7	13.3	116 55	19 95	12 45
No fertilizer	64.4	.....	96 60	......	......

TO ASCERTAIN ACTION OF POTASH ON YIELD OF POTATOES

Rate of application—600 pounds per acre

Fertilizer analysis	Yield per acre	Increase over check per acre	Value of yield per acre	Value of increase over check per acre	Cost of fertilizer
	bags	bags			
2-12-4	85.5	21.1	$128 25	$31 65	$12 00
2-12-6	70	5.6	105 00	8 40	12 45
2-12-8	70	5.6	105 00	8 40	12 90
2-12-10	74.4	10	111 60	15 00	13 35
No fertilizer	64.4	.....	96 60	......	......

DIFFERENT AMOUNTS OF SEED POTATOES SOWN PER ACRE

10 bags per acre produced	65 bags 50 pounds per acre
12 " " "	75 " 50 " "
14 " " "	76 " 60 " "
16 " " "	92 " 20 " "

SIDE-DRESSING EARLY POTATOES

The production of potatoes for the early or midsummer markets permits only a short season for growth. A considerable quantity of readily available plant food is a necessity.

For the past three years the Experimental Farm at Ridgetown has been side-dressing early potatoes with Chilean nitrate of soda at the rates of 150, 200, and 250 pounds per acre applied in late May or early June according to the season. In 1927, an application of 500 pounds of 2-12-2 was applied at the time of planting the potatoes and in 1928 and 1929, 600 pounds of 2-12-6 was applied at the time of planting. Nitrate application was additional.

In 1927 the increase per acre, due to the nitrate of soda, was fifty-four bags and twenty pounds and twenty-nine bags fifty-six pounds in 1928 and twelve bags ten pounds in 1929, or an average of thirty-one bags and eighty-nine pounds per acre.

The average value of the increase per acre, according to market prices, when dug was $45.99. The cost of the fertilizer was $3.60 per hundred or $7.20 per acre. The cost of application is small.

The results give considerable encouragement for the use of a readily available nitrogenous fertilizer during the growth of the crop. If the succeeding tests covering the next three to five years corroborate the past three years' work, we will be justified in recommending the use of such to commercial growers.

The following report covers the work in detail of the past three years:

RESULTS OF EXPERIMENTS WITH NITRATE OF SODA ON EARLY POTATOES AT RIDGETOWN, 1927-29

Fertilizer used	Yield per acre		Increase over check per acre		Value of increase	Cost of nitrate of soda	Return for $1 spent in fertilizer
	bags	lbs.	bags	lbs.			
2-12-2 at 500 pounds per acre plus 200 pounds nitrate of soda per acre	108	2	54	20	$97 61	$7 20	$13 65
2-12-2 at 500 pounds per acre......	53	72	.....	.....	....	....	....
1928							
2-10-6 at 600 pounds per acre plus 250 pounds nitrate of soda.......	289	23	29	56	22 21	9 00	2 46
2-10-6 at 600 pounds per acre......	259	57	.....	.....	....	....	....
1929							
2-12-6 at 600 pounds per acre plus 150 pounds nitrate of soda.......	66	50	12	10	18 16	5 25	3 45
2-12-6 at 600 pounds per acre......	54	40	.....	.....	....	....	....

Average for three years

Nitrate plots	154	55	31	89	....	....	....
Untreated plots	122	56	.....	.....	....	....	....

1927 Date of planting, April 18th, 1927.
Nitrate of soda applied, May 25th, 1927.
Harvested, July 14th, 1927.
Market price of potatoes $1.80 per bag of 90 pounds.

1928 Date of planting, April 18th, 1928.
Nitrate of soda applied, June 15th, 1928.
Harvested, August 2nd, 1928.
Market price of potatoes 75 cents per bag of 90 pounds.

1929 Date of planting, April 23rd, 1929.
Nitrate of soda applied, June 11 and June 21, 1929.
Harvested, July 22nd, 1929.
Market price of potatoes $1.50 per bag of 90 pounds.

FERTILIZER EXPERIMENTS ON CEREAL GRAINS, 1929

Artificial fertilizers are extensively used throughout Western Ontario on cereal grains. Ordinary sixteen per cent. acid phosphate is used in largest quantity because of price; many, however, are using mixed fertilizers.

In order to accumulate some information, a series of experiments have been arranged on wheat, oats and barley and will be carried for five years when some conclusions may be arrived at.

RESULT OF FERTILIZER EXPERIMENT ON BARLEY AT RIDGETOWN, 1929

Fertilizer applied at rate of 200 pounds per acre

Plot No.	Fertilizer analysis	Yield per acre	Increase over check	Value of increase	Cost of fertilizer
		lbs.	lbs.		
1	0-16-0	1,440	550	$8 25	$2 00
2	0-12-4	1,535	645	9 67	3 20
3	2-12-2	1,315	425	6 37	3 88
4	2-12-4	1,330	440	6 60	4 03
5	2-12-6	1,235	345	5 17	4 15
6	4-12-4	1,300	410	6 15	4 60
7	6-12-4	1,430	540	8 10	5 20
8	2-10-4	1,428	538	8 07	3 85
9	2-8-4	1,560	670	10 05	3 65
10	No fertilizer	890	.....	....	.....

NOTE:—The results on barley are based on average prices ($1.50 per cwt.).

RESULT OF FERTILIZER EXPERIMENT ON OATS AT EXPERIMENTAL FARM, RIDGETOWN, 1929

Fertilizer applied at rate of 200 pounds per acre

Plot No.	Fertilizer analysis	Yield per acre	Increase over check	Value of increase	Cost of fertilizer
		bus.	bus.		
1	0-16-0	73.5	6.2	$3 72	$2 00
2	0-12-4	75.5	8.2	4 92	3.20
3	2-12-2	78.5	11.2	6 72	3.88
4	2-12-4	73.8	6.5	3 90	4.03
5	2-12-6	73.8	6.5	3 90	4.15
6	4-12-4	76.1	8.8	5 28	4 60
7	6-12-4	71.1	3.8	2 28	5 20
8	2-10-4	72.0	4.7	2 82	3.85
9	2-8-4	71.4	4.1	2 46	3 65
10	No fertilizer	67.3	....	....	...

NOTE:—The results on oats are based on average market prices (60 cents per bushel).

RESULT OF FERTILIZER EXPERIMENT ON FACTORY TOMATOES AT EXPERIMENTAL FARM, RIDGETOWN, 1929

Fertilizer applied at rate of 800 pounds per acre

Plot No.	Fertilizer analysis	Yield per acre		Value of yield per acre	Increased value over check per acre	Gain per acre after deducting cost of fertilizer
		bus.	lbs.			
1	0-12-6	342	48¾	$137 12	$16 33	$2 93
2	2-10-6	321	46¼	128 71	7 92	....
3	2-12-4	353	51¼	141 54	20 75	4 65
4	2-12-6	363	51¼	145 54	24 75	8 15
5	2-12-8	313	7½	125 25	4 46	....
6	4-12-6	332	11¼	132 87	12 08	....
7	6-12-6	335	0	134 00	13 21	....
Check	No fertilizer	301	58¾	120 79	....	....

NOTE:—The results on factory tomatoes are based on prices paid by factory at Ridgetown (40 cents per bushel).

RESULT OF FERTILIZER EXPERIMENT ON EARLY OUTDOOR TOMATOES AT EXPERIMENTAL FARM, RIDGETOWN, 1929

Fertilizer applied at rate of 800 pounds per acre

Fertilizer analysis	Yield per acre July 10-20		Yield per acre July 21-31		Yield per acre Aug. 1-9		Yield per acre Aug. 10-16		Total yield per acre	
	lbs.	oz.	lbs.	oz.	lbs.	oz.	lbs.	oz.	lbs.	oz.
0-16-0	1,200	0	1,150	0	8,912	8	4,375	0	15,637	8
0-12-4	1,212	8	700	0	9,975	0	5,325	0	17,212	8
0-10-4	1,237	8	975	0	9,181	4	5,525	0	16,918	12
0-8-4	912	8	1,431	4	8,737	8	7,525	0	18,606	4
2-12-4	1,062	8	1,568	12	9,812	8	5,312	8	17,756	4
4-12-4	1,012	8	1,093	12	13,100	0	6,162	8	21,368	12
4-12-0	943	12	800	0	11,668	12	5,037	8	18,450	0
2-12-2	1,162	8	806	4	10,937	8	6,625	0	19,531	4
No fertilizer	1,187	8	1,456	4	8,962	8	4,643	12	16,250	0

RESULT OF TOPPING AND SUCKERING EXPERIMENT ON DARK AIR-CURED TOBACCO, 1928

Method	Weight in pounds per acre sand leaves	Weight in pounds per acre bright leaf	Weight in pounds per acre dark leaf	Total weight pounds per acre
Topped and suckered at proper time...........	628	1,302	23	1,953
Topped at proper time, suckers allowed to get large..................................	588	1,176	70	1,834
Topped when plant was in flower, suckers allowed to get large..............................	326	790	140	1,256

RESULT OF FERTILIZER TEST ON BURLEY TOBACCO, 1928

Comparison of yields from home mixed as against commercial mixed fertilizer

4-10-6 applied at 800 pounds per acre in each case

HOME MIXED		COMMERCIAL MIXED	
Sand leaves................	506 pounds	Sand leaves...............	486 pounds
Bright leaf.................	1,011 "	Bright leaf................	973 "
Dark leaf..................	39 "	Dark leaf.................	58 "
Total.............	1,556 pounds	Total.............	1,517 pounds

Comparison of yields from drilled as against broadcast method of application

4-10-6 applied at 800 pounds per acre in each case

DRILLED		BROADCAST	
Sand leaves................	493 pounds	Sand leaves...............	476 pounds
Bright leaf.................	894 "	Bright leaf................	797 "
Dark leaf..................	162 "	Dark leaf.................	147 "
Total.............	1,549 "	Total.............	1,420 "

RESULT OF FERTILIZER EXPERIMENT ON BURLEY TOBACCO, 1928

4-8-6 applied at rates of 200, 400, 600, 800 and 1,000 pounds per acre

Plot No.	Rate of application per acre	Yield per acre	Increase over check	Value of increase	Cost of fertilizer	Increased return per acre	Return for $1 spent in fertilizer
	lbs.	lbs.	lbs.				
1...........	200	1,605	.....	......	$4 40	......	......
2...........	400	1,796	191	$34 38	8 80	$25 58	$3 90
3...........	600	1,816	211	37 98	13 20	34 78	2 87
4...........	800	1,974	369	66 42	17 60	48 82	3 77
5...........	1,000	1,831	226	40 68	22 00	18 68	1 84
6...........	No fert.	1,605	....	....	....	....	....

RESULT OF FERTILIZER EXPERIMENT ON GREEN RIVER TOBACCO, 1928

Fertilizer applied at 800 pounds per acre in each instance

Plot No.	Fertilizer analysis	Yield per acre	Increase over check	Value of increase	Cost of fertilizer	Increased return per acre	Return for $1 spent in fertilizer
		lbs.	lbs.				
1	2-8-6...........	1,860	262	$36 68	$15 20	$21 48	$2 41
2	4-8-6...........	2,104	506	70 84	17 60	53 24	4 02
3	6-8-6...........	1,900	302	42 28	20 90	21 38	2 02
4	4-6-6...........	2,044	446	62 44	17 10	45 34	3 65
5	4-10-6..........	1,940	342	47 88	18 40	29 48	2 60
6	4-8-4...........	1,859	261	36 54	16 90	19 64	2 16
7	4-8-8...........	2,107	509	71 26	18 10	53 16	3 93
8	No fertilizer....	1,598	.....	......	......	......	.....

RESULT OF FERTILIZER EXPERIMENT ON BURLEY TOBACCO, 1928

Fertilizer applied at 800 pounds per acre in each instance

Plot No.	Fertilizer Analysis	Yield per acre	Increase over check	Value of increase	Cost of fertilizer	Increased return per acre	Return for $1 spent in fertilizer
		lbs.	lbs.				
1	2-8-6...........	1,732	258	$46 44	$15 20	$31 24	$3 05
2	4-8-6.	1,693	219	39 42	17 60	21 82	2 23
3	6-8-6.	1,864	390	70 20	20 90	49 30	3 35
4	4-6-6...........	1,808	334	60 12	17 10	43 02	3 51
5	4 10-6.	1,825	351	63 18	18 40	44 78	3 43
6	4-8-4...........	1,789	315	56 70	16 90	39 80	3 35
7	4-8-8...........	1,858	384	69 12	18 10	41 02	3 81
8	No fertilizer....	1,474	.....	......	......	......	.....

SWINE EXPERIMENTS

PASTURE EXPERIMENT

Alfalfa and other clovers grow luxuriantly in Western Ontario but are not used as largely as they might be as pasture for hogs.

Clovers have a very definite place in not only carrying hogs through the growing period, as practised in this section, but also in the finishing period. Hogs can be very conveniently carried all of the pasture season in clovers.

The following test was made by splitting a litter and placing five pigs in a dry lot where they were given a balanced ration but no green feed. The six pigs had clover pasture in addition to the grain.

Treatment	Breed and No. Yorks.	Weight at beginning	Gain	Oats	Corn	Barley	Hominy	Mineral	Tankage	Total cost	Cost per cwt.
		lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.		
Pasture...	6	582	611	262½	180	495	725	50	225	$41 63	$6 81
Dry......	5	518	571	307½	180	585	875	50	225	47 33	8 28

NOTE:—The pigs used in this experiment were all from one litter.

BARLEY VS. CORN

The substitution of barley for corn as a food for the finishing of pigs became a live question when the corn borer became well established.

SWINE EXPERIMENT, 1929

Pen No.	Breed and No. Yorks.	Weight at beginning	Gain	Oats	Corn	Barley	Hominy	Mineral	Tankage	Total Cost	Cost per cwt.
		lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.		
1	8	795	882	718	......	1,866	548	......	232	$70 76	$8 02
2	9	885	965	738	1,916	......	568	......	343	76 44	7 92

The care and feeding of pigs during winter months is a real problem. When wet foods are used, it is difficult to determine the proper amount of water which should be used to satisfy and not overdo. The following experiment is to test wet against dry feeding.

SWINE EXPERIMENT

Pen No.	Breed and No. Yorks.	Weight at beginning	Gain	Oats	Corn	Barley	Hominy	Mineral	Tankage	Total cost	Cost per cwt.
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.		
Dry feed	8	820	819	808	1,494	......	648	......	190	$65 65	$8 01
Wet feed	8	638	839	700	1,424	......	581	......	196	60 96	7 26

NOTE:—No account was taken of the difference in cost and labour in the above experiment

PROVINCIAL ZOOLOGIST

The establishment of the office of Provincial Zoologist has been quickly and abundantly justified by the work carried on. It has been exceptionally popular with stock men all over the Province and beyond.

The subject of Veterinary Physiology was taught to second and third year students in the Ontario Veterinary College during the college year.

The field work carried on during the year was extensive and of such a varied nature that it may best be considered under sub-headings:

(a) *Demonstration of Value of Treatment.*

Many thousands of lambs, thin and unfit for slaughter reach the stockyards each year. These lambs must be fed for some time in order to bring them up to condition suited for food. Losses through death during the feeding period, for these feeder lambs has averaged over twenty per cent. Gains in many cases have been nil, fewer pounds of lamb being returned to the market in some instances, than were taken from the stockyards six months previously. These thin or poor carcase lambs can be worked off during February and March when the supplies of better meats are running low. In an attempt to improve this undesirable condition, a group of 300 feeder lambs, having an average weight of thirty-eight pounds and the property of one of the largest lamb and sheep feeding organizations in Eastern Canada, were treated for stomach, intestinal and lung parasites. These lambs received feed similar to that given to several thousand other lambs on the same farm. The gains made by the treated lambs were such that a large per cent. were ready for slaughter in late February, having passed the 100-pound per head weight. The loss through death during the feeding period was slightly less than ten per cent., while the untreated lambs on the same farm had a death loss of over twenty-one per cent. Many of the untreated lambs averaged less than a pound a week gain during a five-month feeding period, while the treated lambs made an average gain of three and a half pounds per week. The cost of treating the 300 lambs twice was less than three cents per head. The demonstration proved that all feeder lambs should be treated before going into the feed yards.

(b) *Field Meetings.*

As time would permit field meetings were held in co-operation with the Agricultural Representatives in those counties where the sheep industry is of great importance. These meetings were held on farms central to the various sheep districts, or on farms where trouble had been experienced. All the stockmen of the district were invited to attend. A lecture, a demonstration in treating and a post-mortem were given at each meeting. A typical gathering is shown in an accompanying photograph.

(c) *Demonstrations in Swine Parasite Control.*

In co-operation with the Live Stock Branch and forty-six breeders of registered swine, a demonstration in swine parasite control was conducted. This work covered a period of five months. All herds were visited by fieldman four times during the period. These demonstrations were entirely successful.

(d) *Educational Exhibits.*

Zoological exhibits were placed at the Canadian National Exhibition, the Ontario Provincial Fair, the Western Ontario Corn Shows at Essex and Alvinston, and at sixteen school fairs in Grey County. An exhibit was also staged at the Quebec Lamb Fair and Live Stock Exposition held in Montreal.

(*e*) *Outside Lectures and Demonstrations.*

Lectures and demonstrations in Applied Zoology were given before the Farmers' and Stockmen's Association Annual Meeting, at Fredericton, New Brunswick, and before the Prince Edward Island Farmers' Association at Charlottetown, P.E.I.

Considerable time was spent on the collection of data in the field and in the abattoirs, regarding the various animal pests. Specimens were collected and mounted for use in the laboratory collection, and for use in demonstrations at outside meetings.

Many specimens of fecal material and tissue were received from stock owners during the year. These required examination for evidences of parasitism.

Extension articles were prepared for publication as required. Copy for posters on parasites injurious to sheep and swine was prepared. This manuscript was published under the auspices of the Live Stock Branch. The posters are being distributed jointly by the Live Stock Branch and the Provincial Zoologist.

The Experimental Farm for South West Ontario was inspected twice during the year. The Demonstration Farm for Northern Ontario was inspected twice during the year.

The correspondence reaching the office and the letters sent out from this office have largely related to animal health. Two hundred and thirty-six letters asking information on animal parasites were received during the year. These were from farmers and stockmen resident at widely distributed points in the Province.

LETTER OF TRANSMISSION

TO HIS HONOUR W. D. ROSS,

Lieutenant-Governor of the Province of Ontario.

SIR,—I have the honour to transmit to you herewith, for presentation to the Legislative Assembly of the Province of Ontario, the Thirty-ninth Annual Report of the Department over which I have the honour to preside.

I have the honour to be, Sir,

Your obedient servant,

CHAS. MCCREA,
Minister of Mines.

Department of Mines,
Toronto, 1930.

SESSIONAL 32—1930

INTRODUCTORY LETTER

To The Honourable Chas. McCrea,
Minister of Mines.

Sir,—The undersigned has the honour to submit the Thirty-ninth Annual Report of the Department of Mines, issued in six parts, as follows:—

Part 1

Introductory Letter, by Thos. W. Gibson.
Statistical Review of Ontario's Mineral Industry in 1929, by W. R. Rogers and A. C. Young.
Classes for Prospectors, 1929-30, by E. M. Burwash.
Mines of Ontario in 1929, by D. G. Sinclair, R. H. Cleland, E. C. Keeley, D. F. Cooper, and A. R. Webster.
Mining Accidents in 1929, by D. G. Sinclair, R. H. Cleland, E. C. Keeley, G. S. Jarrett, and A. R. Webster.

Part 2

Pickle Lake–Crow River Area, District of Kenora (Patricia Portion), by M. E. Hurst (Map No. 39*a*).
Sturgeon Lake Gold Area, District of Kenora and Thunder Bay, by A. R. Graham (Map No. 39*b*).
Obonga Lake Chromite Area, District of Thunder Bay, by A. R. Graham.

Part 3

Geology of the Shonia Lake Area, District of Kenora (Patricia Portion), by H. C. Laird (Map No. 39*d*).
Geology of the Area from Minaki to Sydney Lake, District of Kenora, by D. R. Derry (Map No. 39*g*).
Geology of the Shoal Lake (West) Area, District of Kenora, by Leonard Greer (Map No. 39*e*).
Geology of the Bigstone Bay Area, Lake of the Woods, District of Kenora, by G. G. Suffel (Map No. 39*f*).

Part 4

The Ceramic Industry of Ontario, by R. J. Montgomery (Map No. 39*c*).

Part 5

Natural Gas in 1929, by R. B. Harkness.
Petroleum in 1929, by R. B. Harkness.

Part 6

Investigations of Non-Metallic Mineral Resources of Ontario, 1929.
  The Onakawana Lignite Deposit, Moose River Basin, Progress Report to May 31, 1930, by W. S. Dyer.
  Testing of Fire Brick made from Mattagami Clay, by R. J. Montgomery.
  Non-Metallic Minerals of Hastings County, by F. F. Osborne (Map No. 39*h*).

Only Part 1 is bound with the Sessional Papers of the Legislature. All parts, together with accompanying geological maps as indicated above by number and letter, are available on application to the Department.

Respectfully submitted,

Thos. W. Gibson,
Deputy Minister of Mines.

Department of Mines,
Toronto, 1930.

PROVINCE OF ONTARIO
DEPARTMENT OF MINES

HON. CHAS. MCCREA, *Minister of Mines* THOS. W. GIBSON, *Deputy Minister*

THIRTY-NINTH ANNUAL REPORT

OF THE

ONTARIO DEPARTMENT OF MINES

BEING

VOL. XXXIX, PART I, 1930

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1930

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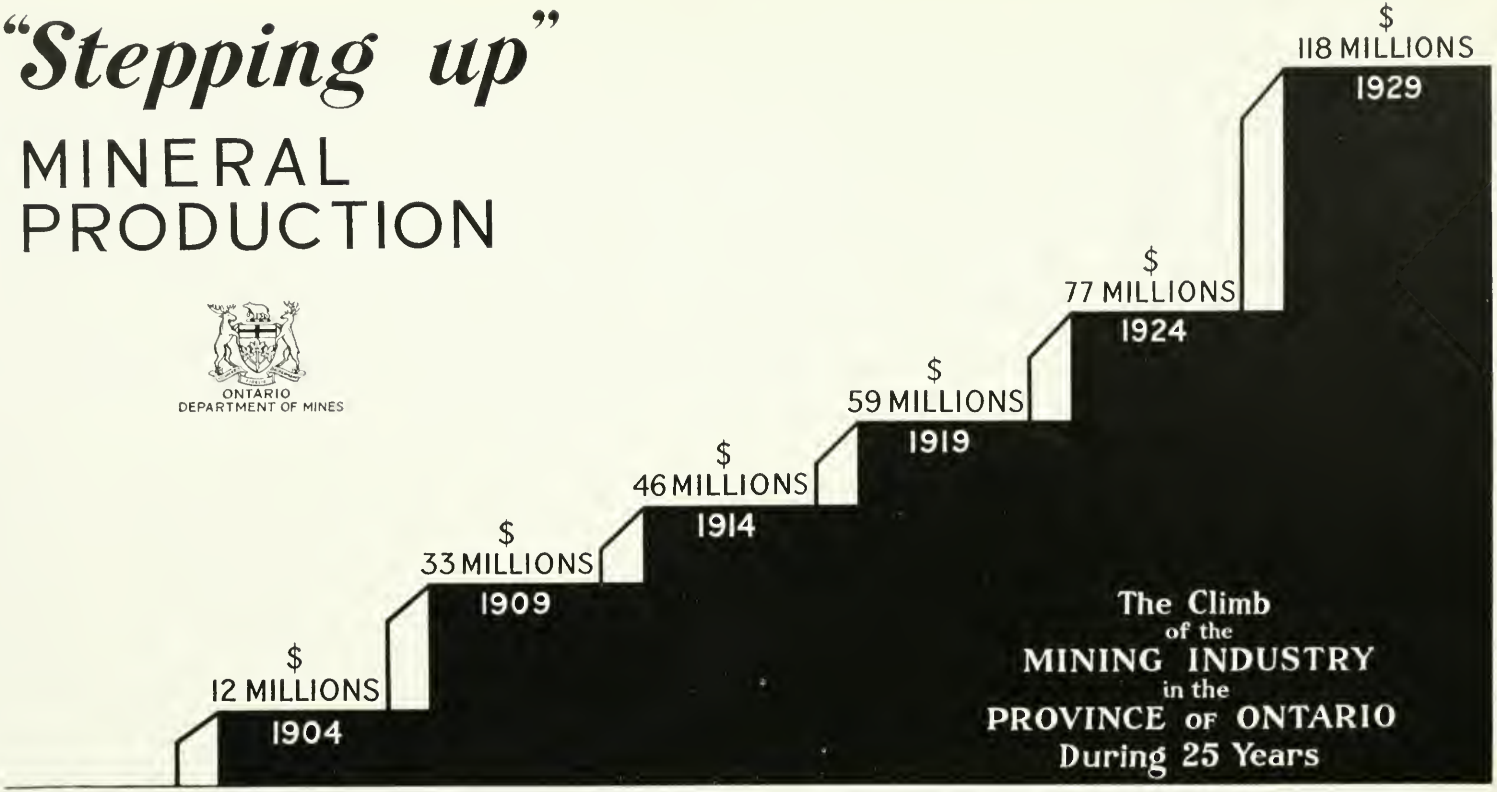
"Stepping up" MINERAL PRODUCTION

ONTARIO
DEPARTMENT OF MINES



The chart describes graphically the rapid growth of Ontario's mineral industry, more particularly during the past five years.

STATISTICAL REVIEW OF ONTARIO'S MINERAL INDUSTRY IN 1929

By W. R. Rogers and A. C. Young

General Remarks

Since 1926 yearly advances have been reported in the value of the mineral production of Ontario, but in point of value the twelve months period of 1929 has far outstripped any previously recorded increase or total.

The total selling value of all mineral products was $117,960,722 as against $100,083,122 in 1928, or an increase of 17.86 per cent. The record of achievement as shown in Tables I and II by subdivisions was: metallics, $83,967,446, or an increase of $12,700,443, amounting to 17.7 per cent.; non-metallics, increase $798,786, or 10.2 per cent.; structural materials, a gain of $3,725,873, or 25.1 per cent.; and clay products showing a gain of $652,498, the largest increase for some years.

Several interesting features were noted during the year, the most important being the large development carried on both at Sudbury and Port Colborne by the International Nickel Company of Canada, Limited, which is commented on in the description of that section of the industry. Gold mining, despite the loss of one of the larger milling plants (Dome), may be said to have had a most satisfactory year. Silver mining as carried on at Cobalt, while handicapped by a quiet market, was enabled by the rising demand for the associated metal cobalt even to increase the output as compared with 1928. While lead production fell off considerably as compared with 1928, it was of interest to note the rising production from the new copper-lead-zinc deposits of the Sudbury area.

Among the non-metallics, gypsum, salt and natural gas all registered important increases while some 13 other items maintained their position. There was a distinct improvement in the heavy structural materials, namely, cement, lime, stone, and sand, all of which have steadily expanded their production during the past five years. Clay products, which now account for more than 6 millions of dollars per annum, have undergone a slower but steady increase in output during the past decade.

The period witnessed the culmination in October of one of the greatest booms recorded in the western hemisphere. After a period of about seven years of continued expansion, stocks of all descriptions had risen to high levels. In this period capital in large volume was available not only in the sounder mining securities but also in the more speculative issues, and the resulting crash in the latter months of the year caused drastic curtailment in many industries. While the drying up of the sources of capital halted the exploratory campaigns and prospecting, the old and well-established mining companies continued in their development and beyond a slackening in the demand for metals on the part of many trades, the productive sections of the mining industry were unshaken.

In the tables which follow complete statistics on every mineral product are presented. The first three tables view the industry in general. In Table I, quantity and value, wage-earners and wages are shown for the current year. Table II covers a five-year period, giving values only for each product, while Table III is a comprehensive historical record giving values since the beginning for metals and since 1891 for the three other groups into which the whole mineral industry is divided.

FINAL SUMMARY OF MINERAL STATISTICS OF ONTARIO FOR 1929

Product (tons of 2,000 lbs.)	Quantity	Value	Employees	Wages
METALLIC:		$		$
Gold ..... oz.	1,622,267	33,535,226	6,462	10,442,437
Silver ..... "	8,711,643	4,630,820	994	1,396,200
Copper in matte exported (*a*) ..... lb.	16,898,515	2,534,777	(*b*)5,981	8,843,500
Nickel in matte exported (*a*) ..... "	28,136,095	5,064,497		
Copper metallic and in concentrates, exported ..... "	71,981,544	12,087,832		
Nickel, metallic and contained in speiss exported ..... "	70,741,300	18,646,391	(*c*)1,302	2,098,550
Nickel oxide and salts ..... "	14,916,784	3,404,573		
Platinum metals ..... oz.	29,615	1,646,381		
Bismuth ..... lb.	27,446	23,413	(*d*)307	297,993
Cobalt, metallic and in residues exported Cobalt oxide (metal content) Cobalt in salts and unseparated oxides ..... "	929,415	1,801,915		
Lead, pig, and in concentrates exported ..... "	4,769,506	294,431	446	706,048
Zinc in concentrates exported ..... "	5,516,806	297,190		
Total	.....	83,967,446	15,492	23,784,728
NON-METALLIC:				
Actinolite ..... tons	30	375	11	1,000
Arsenic, white ..... lb.	3,742,913	154,887	(*d*)	.....
Beryl ..... "	4,456	114	.....	.....
Feldspar, crude and ground ..... tons	21,737	206,979	85	69,629
Fluorspar ..... "	70	1,120	2	200
Graphite, crude and refined ..... "	1,288	90,522	35	33,948
Gypsum ..... "	100,347	832,689	257	311,609
Iron pyrites and sulphur (*e*) ..... "	4,579	51,516	.....	.....
Mica ..... "	2,991	45,919	16	5,533
Mineral water ..... Imp. gals.	309,700	13,651	15	6,864
Natural gas ..... M. cu. ft.	8,583,187	4,968,137	1,323	1,529,367
Peat ..... tons	1,000	4,500	7	6,024
Petroleum, crude ..... bbls.	121,125	253,678	119	91,766
Quartzite and quartz ..... tons	187,973	316,050	94	78,489
Silica brick ..... M.	1,566	80,374	21	30,204
Salt ..... tons	302,445	1,420,424	263	303,618
Talc and soapstone ..... "	15,463	180,492	42	40,055
Total	.....	8,621,427	2,290	2,508,306
STRUCTURAL MATERIALS:				
Cement, Portland ..... bbls.	4,624,712	6,608,246	867	1,061,173
Hydrated lime ..... tons	55,916	740,127	577	398,266
Quicklime ..... bush.	8,978,465	2,624,285		
Sand and gravel ..... tons	8,045,213	3,156,254	620	716,500
Sand-lime brick (*f*) ..... M.	55,750	641,159	190	228,576
Stone: building, trap, granite, etc. ..... tons	5,244,194	4,771,616	1,911	1,577,247
Total	.....	18,541,687	4,165	3,981,762
CLAY PRODUCTS:				
Brick, face ..... no.	119,239,420	2,467,539	2,425	2,298,550
" common ..... "	75,060,203	1,188,688		
" fancy and ornamental ..... "	111,337	9,012		
" sewer ..... "	4,631,020	92,316		
Tile, drain ..... "	22,535,098	629,322		
" structural	.....	1,047,807		
Sewer pipe, copings, flue-linings, etc.	.....	1,167,463		
Pottery	.....	96,394		
Total	.....	(*g*)6,830,162	.....	.....
GRAND TOTAL	.....	117,960,722	24,372	32,573,346

(*a*) Copper and nickel in matte valued at 15 and 18 cents per pound, respectively.
(*b*) Employees and wages for nickel-copper mines and smelters.
(*c*) Employees and wages for nickel-copper refineries.
(*d*) Employees and wages for silver-cobalt smelters and refineries.
(*e*) Tonnage given is sulphur content.
(*f*) No deduction made for lime consumed in manufacturing.
(*g*) Includes $131,621 worth of Haydite.

TABLE II.—COMPARATIVE VALUE OF MINERAL PRODUCTION, 1925-1929

Product	1925	1926	1927	1928	1929
METALLIC:	$	$	$	$	$
Gold	30,206,432	30,950,753	33,627,040	32,629,111	33,535,226
Silver	6,964,325	5,781,706	5,230,402	4,156,431	4,630,820
Platinum metals	1,676,446	1,559,527	1,270,843	1,309,923	1,646,381
Cobalt (*a*)	2,328,517	1,136,014	1,764,534	1,671,900	1.801,915
Nickel (*b*)	15,946,673	14,374,163	15,262,171	22,318,907	27,115,461
Copper, metallic and in matte	4,739,124	4,828,964	4,946,533	8,770,149	14,622,609
Iron ore (*c*)	....	....	....	....	....
Pig iron (*d*)	....	....	....	....	....
Lead (pig) and in ore	601,704	580,730	528,729	402,289	294,431
Zinc in ore and concentrates	13,685	....	....	3,226	297,190
Bismuth	18,566	6,440	1,003	5,067	23,413
Total	62,495,472	59,218,297	62,631,255	71,267,003	83,967,446
NON-METALLIC:					
Abrasives (*e*)	945	576	....	....	....
Actinolite	500	1,000	1,075	875	375
Arsenic white	113,325	135,549	197,668	178,149	154,887
Asbestos	901	3,935	....	....	....
Beryl	....	....	....	....	114
Feldspar, crude and ground	141,059	199,102	154,533	180,153	206,979
Fluorspar	200	....	....	....	1,120
Graphite, crude and refined	134,213	158,994	109,613	52,373	90,522
Gypsum	491,833	496,059	500,688	553,271	832,689
Iron pyrites and sulphur	8,799	4,912	6,077	(*f*) 54,100	(*f*) 54,056
Mica	82,661	59,085	75,183	32,945	45,919
Mineral water	25,452	27,277	12,811	27,890	13,651
Natural gas	4,083,341	4,415,918	4,331,780	4,535,312	4,968,137
Peat fuel	8,394	....	....	5,845	4,500
Petroleum, crude	396,154	376,822	289,391	249,981	253,678
Phosphate of lime (apatite)	....	....	824	....	....
Quartzite and quartz	(*g*) 359,691	339,304	266,204	308,608	316,050
Silica brick	....	56,411	(*h*) 28,549	86,323	80,374
Salt	1,466,450	1,388,672	1,510,777	1,377,629	1,420,424
Talc and soapstone	174,116	178,986	181,981	179,187	180,492
Total	7,488,034	7,842,632	7,638,605	7,822,641	8,621,427
STRUCTURAL MATERIALS:					
Cement, Portland	5,253,911	4,792,857	5,144,326	5,520,897	6,608,246
Lime, hydrated and quicklime	2,044,125	2,051,446	2,198,239	2,467,843	3,364,412
Sand and gravel	1,658,700	2,117,461	2,035,793	2,056,366	3,156,254
Sand-lime brick	677,103	461,376	(*i*) 721,485	(*i*) 745,719	641,159
Stone: building, trap, granite, etc.	2,817,335	3,258,168	4,060,709	4,024,989	4,771,616
Total	12,451,174	12,681,308	14,160,552	14,815,814	18,541,687
CLAY PRODUCTS:					
Brick, face	2,403,832	2,436,848	2,287,495	2,267,268	2,467,539
" common	733,793	768,734	1,063,724	1,154,763	1,188,688
" fancy and ornamental	21,728	20,047	25,016	25,714	9,012
" sewer	37,082	111,620	202,920	49,547	92,316
Tile, drain	360,710	340,403	521,957	572,577	629,322
" structural, roofing and floor	612,138	756,011	808,436	1,035,119	1,047,807
Sewer pipe, copings, flue-linings, etc.	893,443	835,206	852,187	974,157	1,167,463
Pottery	86,000	87,600	91,300	98,519	96,394
Total	5,148,626	5,356,469	5,853,035	6,177,664	(*j*) 6,830,162
GRAND TOTAL	**87,583,306**	**85,098,706**	**90,283,447**	**100,083,122**	**117,960,722**

(*a*) Cobalt oxide, metallic cobalt, and cobalt content of residues marketed.
(*b*) Nickel in matte, oxide, and metallic nickel.
(*c*) Exports and shipments to points other than Ontario blast furnaces.
(*d*) Product from Ontario ore only. (*e*) Includes garnets and quartz pebbles.
(*f*) Includes value of sulphuric acid produced. (*g*) Includes value of silica brick.
(*h*) Not included in the total of non-metallics or grand total.
(*i*) No deduction made for lime consumed in manufacturing.
(*j*) Includes $131,621 worth of Haydite.

In Table III is given the aggregate value of the metals and metallic products from the time production began in Ontario down to the end of 1928. As regards pig iron it should be pointed out that since 1914 the statistics of annual production credit the Province only with the value of the product made from Ontario ore. This is but a small part of the total output, since the great bulk of the iron ore charged to the blast furnaces of the Province is "lake" ore from the mines of Minnesota and Wisconsin. In the production tables credit is taken only for the ore exported or shipped to points other than Ontario blast furnaces, since to include the value of the domestic ore converted into pig iron in Ontario furnaces would involve a duplication of this item.

TABLE III.—TOTAL MINERAL PRODUCTION OF ONTARIO

Year	Value of Mineral Production				
	Metallic	Non-Metallic	Structural Materials	Clay Products	Total
	$	$	$	$	$
Before 1891....	(*a*) 9,520,269		(*a*)		9,520,269
1891..........	388,715		4,316,958		4,705,673
1892..........	864,382		4,509.757		5,374,139
1893..........	614,762		5,505,991		6,120,753
1894..........	842,750		5,244,008		6,086,758
1895..........	616,055		4,554,083		5,170.138
1896..........	963,288		4,271,715		5,235,003
1897..........	1,038,089		(*b*) 4,480,452		(*b*) 5,518,541
1898..........	1,689,002		5,546,875		7,235,877
1899..........	2,055,592		6,361,081		8,416,673
1900..........	2,565,286		6,733,338		9,298,624
1901..........	5,016,734		6,814,352		11,831,086
1902..........	6,257,499		7,134,135		13,391,634
1903..........	5,242,575		7,628,018		12,870,593
1904..........	4,906,677		6,665,970		11,572,647
1905..........	10,201,010		7,653,286		17,854,296
1906..........	13,353,080		9,035,303		22,388,383
1907..........	14,550,835	3,020,537	3,876,275	3,571,726	25,019,373
1908..........	16,754,986	2,629,749	3,396.406	2,856,476	25,637,617
1909..........	22,928,496	2,825,751	4,028,206	3,198,922	32,981,375
1910..........	28,161,678	3,141.658	4,380,000	3,630,559	39,313,895
1911..........	29,102,867	3,674,926	4,935,609	4,263,395	41,976,797
1912..........	34,799,734	4,009,643	4,701,170	4,831,056	48,341,603
1913..........	37,507.935	4,296,450	5,866,775	5,561,151	53,232,311
1914..........	33,345,291	4,339,703	4,505,368	4,105,597	46,295,959
1915..........	44,109,769	4,655.250	3,609,371	1,871,379	54,245,679
1916..........	55,002,918	4,982,140	3,734,065	1,584,699	65,303,822
1917..........	56,831,857	7,702,942	4,962,284	2,596.749	72,093,832
1918..........	66,178,059	7,815,062	4,297,401	2,018,450	80,308,972
1919..........	41,590,759	6,308,182	7,208,413	3,776,562	58,883,916
1920..........	48,281,553	8,141,796	11,921,019	4,735,154	73,079.522
1921..........	28,777,581	6,636,217	13,967,386	5,183,125	54,564,309
1922..........	40,290,157	7,591,913	13,640,166	6,944,218	68,466,454
1923..........	44,076,660	8,511,786	13,139.757	6,269,140	71,997,343
1924..........	52,130,314	7,555,283	12,398,465	5,137,865	77,221,927
1925..........	62,495,472	7,488,034	12,451,174	5,148,626	87,583,306
1926..........	59,218,297	7,842,632	12,681,308	5,356,469	85,098,706
1927..........	62,631,255	7,638,605	14,160,552	5,853,035	90,283,447
1928..........	71,267,003	7,822,641	14,815,814	6,177,664	100,083,122
1929..........	83,967,446	8,621,427	18,541,687	6,830,162	117,960,722
Total.....	1,100,136,597		532,428,499		1,632.565,096

(*a*) Prior to 1891, when the Ontario Bureau (now Department) of Mines was established it is estimated that metals to the value of $9,520,269 were produced. No estimate has been made of the output of non-metallics up to 1891.

(*b*) Estimated on basis of preceding year ($1,618,720 for stone, lime, and clay products).

In the total production of metals in Ontario noted hereunder, gold moved up from third to first place in 1927:—

Metal or Product	Production to December 31, 1928	Production, 1929	Production to December 31, 1929
	$	$	$
Gold	281,698,937	33,535,226	315,234,163
Nickel, including nickel oxide and salts	265,497,598	27,115,461	292,613,059
Silver	243,352,960	4,630,820	247,983,780
Copper (*a*)	91,365,196	14,622,609	105,987,805
Pig iron	84,775,556	....	84,775,556
Cobalt (*b*)	21,146,459	1,801,915	22,948,374
Platinum metals	14,410,150	1,646,381	16,056,531
Iron ore (*c*)	9,463,516	....	9,463,516
Lead	4,030,414	294,431	4,324,845
Molybdenite	209,735	....	209,735
Zinc, in ore and concentrates	111,502	297,190	408,692
Bismuth	107,128	23,413	130,541
Total	1,016,169,151	83,967,446	1,100,136,597

(*a*) Includes small quantities of copper sulphate.
(*b*) Includes metal, oxide, salts, and cobalt contents of residues exported.
(*c*) Value of ore shipped out of the Province.

Diamond Drilling.—As a prospecting tool the diamond-drill continues to gain in favour with the mining companies of Ontario. The following table gives data covering operations in Ontario during the past four years:—

DIAMOND DRILLING OPERATIONS, 1926-1929

Year	Machines Operated	Holes Drilled	Core Extracted	
			Feet	or Miles
1926	71	1,986	385,932	70.8
1927	72	1,484	359,041	68.0
1928	85	1,901	485,304	91.9
1929	144	2,325	489,156	92.6

During the year under review the areas where the drilling was done were: Porcupine, 199,133 feet; Sudbury, 166,883; Kirkland Lake and Boston Creek, 82,573; Northwestern Ontario, 25,576; Gowganda area, 10,907 feet; Hastings, 317; and Abitibi coal areas, 2,767 feet.

In addition to the above the Ontario companies completed a considerable footage of diamond drilling in other provinces as follows: Quebec, 153,040 feet; Manitoba, 84,885 feet; Nova Scotia, 10,846 feet; and Saskatchewan, 2,900 feet; or a total of 251,671 lineal feet in other provinces, making a grand total of 740,827 feet in 1929.

On this work 604 men were employed by sixteen companies and $918,527 was paid in wages. For the first time the Department has collected statistics on diamonds used in drilling. During the period black diamonds totalling in weight 6,022.97 carats; borts, 7,887.83; and ballas, 293.67; or a total of 14,204.47 carats were purchased at a price of $715,166. The cost of diamonds depends on the size and grade. The average cost per carat to the operator was $50.00.

The value of imports into Canada of diamond dust, bort and black diamonds for borers during the past four years are shown below, eight countries being represented as the source of supply. As will be noted, by far the major portion comes from the United States, indicating that the diamond supply houses of that country control the supply of industrial diamonds in Canada. The figures follow[1]:—

Source	1926	1927	1928	1929
	$	$	$	$
United Kingdom	19,256	56,593	136,422	141,676
United States	930,850	1,304,976	2,115,508	2,560,323
British South Africa	....	1,713	6,238	1,424
Australia	1,460	....	....	....
Belgium	4,324	1,351	5,403	11,091
Brazil	....	....	....	445
France	1,835	5,513	2,599	3,489
Netherlands	5,416	25,976	15,079	8,837
Total Imports	963,141	1,396,122	2,281,249	2,727,285

[1] Data supplied by the Dominion Bureau of Statistics.

Statistics of exports of industrial diamonds were not available, due to the fact that this classification is not specially provided for in the Canadian export statistics. It is known, however, that a considerable portion of the imports are re-exported.

DIAMOND-DRILL OPERATORS IN ONTARIO IN 1929

Name	Ontario Address	No. of drills active
Badeski, F	Timmins	9
Chisholm, D. D. (Kirkland Lake Diamond Drilling Co.)	Timmins	7
Dome Mines, Ltd	South Porcupine	2
O'Brien mine	Cobalt	1
McIntyre Porcupine Mines, Ltd	Schumacher	3
Mitchell, W. J., (Diamond-Drill Company, Ltd.)	Cobalt	22
Morissette, N	Haileybury	5
Ontario Diamond-Drilling Co., Ltd	Sudbury	11
Ryan Diamond-Drilling Co., Ltd	Timmins	12
Smith & Travers	Sudbury	20
Wright-Hargreaves Gold Mines, Ltd	Kirkland Lake	1
Sudbury Diamond-Drilling Co., Ltd	Sudbury	39
Baker, John	Buckingham, P.Q	1
Capital Engineering Co., Ltd	New Liskeard	7
Patterson Diamond Drilling Co., Ltd	Cobalt	3
Oscar R. Smith Diamond Drilling Co., Ltd	Sudbury	1

Hydro-Electric Power.—During the year the Lake Shore mine at Kirkland Lake signed a new and more advantageous power contract with the Canada Northern Power Corporation which supplies Cobalt, Gowganda, Kirkland Lake, and Porcupine. Early in 1930 the Teck-Hughes mine did likewise, and the smaller consumers at Kirkland Lake have since come to terms with the Company.

Power is supplied by the Hydro-Electric Power Commission of Ontario, from Ear Falls on the English River at the foot of Lac Seul, at $25 per horsepower. The cost to the Howey mine at Red Lake, including a 41½ mile transmission line and sub-station costs, is only $32.50 per horsepower. Power was turned on January 28, 1930, and marks the first effort of the Commission to supply mining camps with electric power. The Ear Falls installation of 5,000 horsepower marks an epoch as regards the policy of the Commission in regard to power needs for mining areas in Northern Ontario.

In February, 1930, the Hydro-Electric Power Commission purchased the balance of the stock of the Wahnapitae Power Company. This gives entire control of the plant supplying power to Coniston smelter, Treadwell-Yukon, and Falconbridge mines. A new dam has been completed on the Wanapitei River at the outlet of Wanapitei Lake, which will permit of increased power capacity.

To meet the growing need for power at Sudbury, chiefly for the new smelter and refinery of the International Nickel Company of Canada, Ltd., the Commission contracted with the Hudson's Bay Power Company, a subsidiary of the Abitibi Power and Paper Company, for 100,000 horsepower of a new 275,000 horsepower installation at the canyon of the Abitibi below Island Falls. Power is to be delivered at a cost of $13.50 per horsepower year at Hunta, a station on the Canadian National Railway, a few miles west of Cochrane, from which point a new transmission line is being built to Sudbury. From power plant to Sudbury is over 240 miles, the longest transmission line in Ontario. In August, 1930, the power plant contract was awarded to Dominion Construction Company and it is expected this power, developed under a head of 237 feet, will be available by October, 1932.

Gold

In the following table the value of the total gold output of the Province, exclusive of premium, is given, also that from the main camps, Porcupine and Kirkland Lake, beginning in 1910 and 1913 respectively:—

TABLE IV.—TOTAL GOLD PRODUCTION IN ONTARIO

Year	Total Production	Porcupine		Kirkland Lake	
	$	$	Per cent.	$	Per cent.
1866-1891	(*a*) 190,258	....	....	....	....
1892-1909	(*b*) 2,509,492	....	....	....	....
1910	68,498	35,539	51.8	....	....
1911	42,637	15,437	36.2	....	....
1912	2,114,086	1,730,628	81.8	....	....
1913	4,558,518	4,294,113	94.1	86,316	1.9
1914	5,544,979	5,206,006	93.8	114,154	2.0
1915	8,501,391	7,462,111	88.6	551,069	6.5
1916	10,339,259	9,391,408	90.8	702,761	6.8
1917	8,698,735	8,229,744	94.5	404,346	4.6
1918	8,502,480	7,767,907	91.4	632,007	7.4
1919	10,451,709	9,942,803	95.1	486,809	4.7
1920	11,686,043	10,597,572	90.7	1,033,478	8.8
1921	14,692,357	13,103,526	89.5	1,524,851	10.4
1922	20,579,569	18,374,658	89.3	2,159,581	10.5
1923	20,136,287	17,313,115	85.9	2,719,939	13.5
1924	25,669,303	22,135,534	86.2	3,446,632	13.4
1925	30,206,432	24,733,120	81.8	5,385,256	17.8
1926	30,950,753	23,680,670	76.5	7,174,083	23.2
1927	33,627,040	23,851,857	70.9	9,674,114	28.7
1928	32,629,111	20,246,319	62.0	12,233,524	37.5
1929	33,535,226	19,281,286	57.6	14,046,596	41.8
Total to end of 1929	315,234,163	247,392,353	78.5	62,375,516	19.8

As compared with the year 1928, gold output in Ontario showed an advance of nearly one million dollars in value. The total output from all sources during the year was 1,622,267 fine ounces, valued at $33,535,226, as against 1,578,433 fine ounces worth $32,629,111 in 1928. The gain in output was due entirely to expanding production at the mines of the Kirkland Lake camp where the Lake Shore and Teck-Hughes are the most important producers. The output from Porcupine was lower in 1929 than in the previous year, due to the lower grade of ore treated at the Hollinger as well as to a decrease of 229,313 tons in quantity milled. The loss of the Dome mill, which was destroyed by fire on October 29, accounted for about 90,000 tons of the decrease in ore milled in the Porcupine area. At Kirkland Lake, ore milled showed an increase of 67,949 tons above the figure for 1928. During the period under review there was considerable development work in the northwestern portion of the Province, namely, at Michipicoten, Moss township, Red and Woman Lakes, and the new field in Patricia known as Crow River. The Howey mine at Red Lake was completing its 500-ton mill, and production commenced in April, 1930.

TABLE V.—ONTARIO'S GOLD PRODUCTION, 1929

Source	Ore milled, tons	Bullion shipped				Total Value of Bullion[1]
		Gold content		Silver content		
		Fine ounces	Value $	Fine ounces	Value $	$
PORCUPINE						
Ankerite	12,912	3,458 17	71,487	355	197	71,684
Coniaurum	103,293	30,640.66	633,399	3,978	2,086	635,485
Dome	452,900	173,041.81	3,577,091	25,568	13,446	3,590,537
Hollinger	1,549,157	455,093.96	9,407,627	91,474	47,663	9,455,290
March	48,484	12,369 90	255,708	1,165	595	256,303
McIntyre	550,100	206,627.67	4,271,373	46,727	24,118	4,295,491
Porcupine United (Rochester)	5,048	2,133.90	44,111	343	174	44,285
Vipond[2]	108,225	39,569.25	817,969	5,152	2,698	820,667
West Dome Lake	35,142	7,500.92	155,058	1,406	739	155,797
Miscellaneous	....	2,296.02	47,463	458	238	47,701
Total	2,865,261	932,732.26	19,281,286	176,626	91,954	19,373,240
KIRKLAND LAKE						
Argonaut clean-up[2]	291	478 52	9,892	135	67	9,959
Barry-Hollinger	22,343	7,321 05	151,340	829	418	151,758
Kirkland Lake Gold	53,595	16,999 27	351,406	2,677	1,383	352,789
Lake Shore	430,170	293,586 51	6,068,971	39,902	21,218	6,090,189
Sylvanite	74,523	33,167 70	685,637	7,242	3,828	689,465
Teck-Hughes[3]	337,630	243,744 51	5,038,646	18,733	9,774	5,048,420
Wright-Hargreaves	188,238	83,631 42	1,728,815	11,323	5,913	1,734,728
Miscellaneous	....	575 13	11,889	70	36	11,925
Total	1,106,499	679,540 11	14,046,596	80,911	42,637	14,089,233
NORTHWESTERN ONTARIO						
Bathurst (Woman Lake)	high grade	149 06	3,081	50	26	3,107
Bobjo (Woman Lake)	"	361 70	7,477	29	15	7,492
Cooper (Michipicoten)	sample tests	298 22	6,165	37	19	6,184
Parkhill (Michipictoen)	33	99 00	2,047	19	10	2,057
St. Anthony (Sturgeon Lake)[3]	684	115 00	2,377	23	11	2,388
Wabigoon-Contact Bay[2]	34	8 00	165	34	17	182
Gold Rock	300	35 00	723	5	3	726
Gold ores shipped to Noranda[4]	12	34 48	713	....	....	713
Big Turtle River Mining Co[2]	19	11 59	240	11	5	245
Total	1,082	1,112 05	22,988	208	106	23,094
TOTAL for Gold Mines	3,972,842	1,613,348 42	33,350,870	257,745	134,697	33,484,916
Nickel-Copper Refineries	....	7,802 00	161,282	429,541	227,625	388,907
In copper ores shipped to Noranda	....	11 83	244	1,030	546	790
In Treadwell-Yukon exports	....	1,104 40	22,830	52,787	27,972	50,802
GRAND TOTAL (all sources)	....	1,622,266 65	33,535,226	741,103	390,840	33,926,066

[1] Premium received in addition to values quoted amounted to $87,173 at Porcupine and $70,283 at Kirkland Lake.

[2] Copper was also contained in these gold ores: Vipond 402 lb.; Argonaut 10,027 lb.; Wabigoon-Contact Bay 200 lb.; and Big Turtle 251 lb., or a total of 10,886 lb. of copper.

[3] Includes 7,290 tons of tailings retreated by Teck-Hughes and 6 tons by St. Anthony.

[4] These ores were shipped via Temiskaming Testing Laboratory and included 10.92 tons from the Baldwin worth $403; Harkness Hays 0.71 tons, $71; P. Edward 0.25 tons, $14; W. B. Longworth 0.06 tons, $225.

TABLE VI.—VALUE OF TOTAL PRODUCTION (GOLD AND SILVER) BY MINES OF THE KIRKLAND LAKE AREA

Year	Lake Shore	Teck-Hughes	Wright-Hargreaves	Tough-Oakes Burnside	Kirkland Lake	Sylvanite	Argonaut (*a*)	Barry-Hollinger	Canadian Associated Goldfields	Lucky Cross	Gold Hill	Ontario-Kirkland	Swastika	Total Value (*b*)
1913	.....	.....	$1,127	$66,632	.....	.....	.....	.....	.....	$14,006	.....	.....	$7,172	$88,937
1914	.....	.....	.....	117,644	.....	.....	$5,204	.....	.....	.....	.....	.....	.....	122,848
1915	.....	.....	.....	555,539	.....	.....	.....	.....	.....	.....	.....	.....	.....	555,539
1916	.....	.....	.....	711,625	.....	.....	.....	.....	.....	.....	.....	.....	.....	711,625
1917	.....	$66,722	.....	342,831	.....	.....	.....	.....	.....	.....	.....	.....	.....	409,553
1918	$416,414	80,570	.....	139,683	.....	.....	.....	(*c*)10,114	.....	.....	.....	.....	.....	646,781
1919	263,354	169,590	.....	.....	$56,263	.....	2,631	.....	.....	.....	.....	.....	.....	491,838
1920	503,735	247,757	.....	.....	286,901	.....	26,863	.....	.....	.....	.....	.....	.....	1,065,256
1921	495,276	322,919	468,751	.....	242,417	.....	513	.....	.....	.....	.....	.....	.....	1,529,875
1922	471,341	596,495	762,753	107,481	224,396	.....	.....	.....	.....	.....	.....	$10,082	.....	2,172,458
1923	547,600	1,117,963	754,979	12,174	223,102	.....	72,512	.....	.....	.....	.....	.....	.....	2,728,331
1924	1,098,572	1,023,025	1,088,725	47,547	46,512	.....	152,072	.....	.....	.....	.....	.....	.....	3,456,453
1925	1,958,720	996,943	1,913,401	263,064	.....	.....	214,183	56,978	.....	.....	.....	.....	.....	5,403,289
1926	2,775,000	1,601,209	2,150,844	309,709	126,999	.....	143,387	86,263	.....	.....	.....	.....	.....	7,193,411
1927	3,375,053	2,781,962	2,151,916	153,215	473,673	$429,424	127,448	175,692	$34,595	.....	(*d*) $865	.....	.....	9,703,843
1928	4,073,965	4,948,896	1,838,510	82,316	414,596	738,146	32,430	111,767	17,700	.....	12,784	.....	.....	12,271,110
1929	6,090,189	5,048,420	1,734,728	.....	352,789	689,465	9,959	151,758	.....	.....	.....	.....	.....	*e*14,089,233
Total	22,069,219	19,002,471	12,865,734	2,909,460	2,447,648	1,857,035	787,202	592,572	52,295	14,006	13,649	10,082	7,172	62,640,470

(*a*) Exclusive of copper values. (*b*) Exchange premiums received in addition to the above valuations were as follows: 1920, $110,424; 1921, $121,425; 1922, $19,590; 1923, $37,812; 1924, $24,028; 1925, $231 discount, 1926, $595 discount; 1928, $2,810.55; and 1929, $70,283. (*c*) Patricia mine, afterwards called Barry-Hollinger. (*d*) Samples shipped in 1923 and 1926 not heretofore reported. (*e*) Contains $11,925 miscellaneous (estimate of high grade).

TABLE VII.—VALUE OF TOTAL PRODUCTION (GOLD AND SILVER) BY MINES OF THE PORCUPINE AREA

Year	Hollinger	Dome	McIntyre	Vipond	Porcupine Crown and Northcrown	West Dome Lake	Ankerite	Coniaurum	Night Hawk Peninsular	Schumacher (*a*)	March	Paymaster	Rea and Newray
1910	$31,194	$4,355											
1911	6,000	4,277		$5,160									
1912	909,181	737,499	$77,657	16,259									
1913	2,488,022	1,242,625	236,299		Porcupine Crown $326,803								Rea $18,858
1914	2,719,355	1,059,238	549,166	73,628	685,135								125,255
1915	4,206,015	1,530,287	750,812	246,053	602,436	$102,880				$48,236			
1916	5,073,401	2,153,820	1,218,073	176,686	578,322	16,814				225,301			
1917	4,261,938	1,480,174	1,710,204	209,738	377,904	44,434				198,605			New-ray 1,447
1918	5,752,371	82,127	1,578,444	82,868	124,474	103,745				92,842			1,516
1919	6,722,266	1,290,301	1,978,014			23,910							
1920	6,219,665	2,020,568	2,223,083		N'thcrown 71,529 97,301	47,169							
1921	9,051,276	2,290,264	1,827,761		7,943								
1922	12,274,114	4,178,936	2,021,811									$2,800	
1923	10,446,412	4,374,144	2,550,129	23,876									
1924	13,433,063	4,307,624	3,604,874	596,803		60,642			$268,518				
1925	15,749,109	4,365,923	3,721,499	565,379		287,758			196,947				
1926	14,829,655	3,940,053	3,862,074	631,636		220,758	$140,588		111,154		$11,055	63,551	
1927	14,539,538	4,031,575	3,965,210	667,724		(*b*)35,252	359,005		166		19,839	135,025	
1928	10,706,235	3,915,051	4,201,808	694,426			289,960	$220,534			133,879	183,271	
1929	9,455,290	3,590,537	4,295,491	820,667		155,797	71,684	635,485			256,303		
Total	148,874,100	46,599,378	40,372,409	4,810,903	2,871,847	1,099,159	861,237	856,019	566,885	561,984	421,076	384,647	147,076

(*a*) Purchased by the Hollinger in 1922 (*b*) Total value of bullion in 1927 was $87,919. Figures shown in above table allow for a deduction of $52.667 due to an erroneous return made in 1925.

TABLE VII.—VALUE OF TOTAL PRODUCTION (GOLD AND SILVER) BY MINES OF THE PORCUPINE AREA—*Continued*

Year	David-son	Porcupine United	Preston and Clifton	Scottish Ontario	Porcupine Pet	Porphyry Hill	Gold Reef	Tommy Burns	De Santis	Hughes	Miscel-laneous	Total Value (*c*)
1910												$35,549
1911												15,437
1912												1,740,596
1913			Pres-ton			$4,200						4,316,807
1914			$15,212		$5,000							5,231,989
1915					5,551	2,036	$1,547					7,495,853
1916												9,442,41
1917							588	$289				8,285,321
1918	$15,579											7,833,966
1919	27,089											10,041,580
1920	11,246											10,690,561
1921												13,177,244
1922			Clifton 1,661									18,479,325
1923			8,331								(*d*) $2,756	17,405,648
1924			5,270									22,266,894
1925												24,886,615
1926									$146	$30		23,810,700
1927				$5,893							(*e*) 217,350	23,976,577
1928				6,795							(*f*) 140	20,352,099
1929		44,285									(*g*) 47,701	19,373,240
Total	53,914	44,285	30,477	12,688	10,551	6,236	2,135	289	146	30	267,947	248,858,418

(*c*) A record of total exchange premiums received in addition to the above amounts shows the following: 1920, $1,265,664; 1921, $1,238,211; 1922, $189,022; 1923, $207,742; 1924, $172,721; 1925, $2,607 discount; 1926, nil; 1928, $2,810.55; and 1929, $87,173. (*d*) Huddlestone and Cline. (*e*) Includes "highgrade" recovered from W. P. Wilson. (*f*) Blue Quartz. (*g*) Highgrade.

TABLE VIII.—DIVIDENDS AND BONUSES PAID BY GOLD MINING COMPANIES TO DECEMBER 31, 1929

Name of Company	Date of Incorporation	Authorized Capital, $ or shares	Capital Stock Issued, $ or shares	Par value per share	Dividends and Bonuses paid to end of 1928, Amount	Dividends and Bonuses paid during 1929, Amount	Rate per cent., or per share, 1929	Total of Dividends and Bonuses paid to Dec. 31, 1929	Date when last Dividend or Bonus was paid
				$	$	$		$	
Dome Mines, Ltd. (*a*)	Sept. 30, 1923	1,000,000	1,000,000	No par	12,405,840.75	953,334.00	$1.00	13,359,174.75	Oct. 20, 1929
Hollinger Cons. Gold Mines, Ltd. (*b*)	May 25, 1916	25,000,000	24,600,000	5.00	48,144,400.00	3,198,000.00	13%	51,342,400.00	Dec. 31, 1929
Lake Shore Gold Mines, Ltd	Feb. 25, 1914	2,000,000	2,000,000	1.00	6,020,000.00	2,200,000.00	110%	8,220,000.00	Dec. 16, 1929
McIntyre-Porcupine Mines, Ltd	Mar. 16, 1911	4,000,000	3,990,000	5.00	7,601,408.00	798,000.00	5%	8,399,408.00	Dec. 3, 1929
Porcupine Crown Mines, Ltd	May 25, 1913	2,000,000	2,000,000	1.00	840,000.00	....	......	840,000.00	July 15, 1917
Rea Consolidated Gold Mines, Ltd	April 5, 1911	1,000,000	200,000	5.00	12,000.00	....	......	12,000.00	1915
Schumacher Gold Mines, Ltd. (*c*)	Jan. 6, 1914	2,000,000	1,850,000	1.00	....	....	......	....	....
Teck-Hughes Gold Mines, Ltd, The	Mar. 1, 1923	5,000,000	4,767,144	1.00	4,048,572.40	2,866,286.40	60%	6,914,858.80	Nov. 1, 1929
Tough-Oakes Gold Mines, Ltd	July 15, 1913	3,000,000	2,657,500	5.00	398,625.00	....	......	398,625.00	Dec. 27, 1916
Vipond Consolidated Mines, Ltd	July 17, 1922	2,500,000	2,250,000	1.00	67,500.00	....	......	67,500.00	April 5, 1927
Wright-Hargreaves Mines, Ltd. (*d*)	June 16, 1916	5,550,000	5,550,000	No par	4,331,250.00	....	......	4,331,250.00	Nov. 1, 1928
Total	....	....	....	......	83,869,596.15	10,015,620.40	......	93,885,216.55	....

(*a*) On April 22, 1922, the capital of Dome Mines Co., Ltd., was reduced from $5,000,000 to $4,500,000 and $476,667 distributed to shareholders in addition to dividends paid to September 30, 1923, when the new company, Dome Mines, Limited, issued 1,000,000 N.P.V. shares at $7.00 per share. Of these 46 666 shares are transferred to a Trustee and held in trust for the company

(*b*) Hollinger Consolidated Gold Mines, Limited, is an amalgamation of the Acme Gold Mines, Ltd.; Millerton Gold Mines, Ltd.; and Hollinger Gold Mines, Ltd. Dividends include $160,000 paid in 1915 by Acme, also $4,170,000 paid by Hollinger to May 25, 1916, the date of consolidation.

(*c*) The Schumacher mine was sold to the Hollinger in 1922 and a total of $1,591,000 or 86 per cent. of the assets distributed to shareholders, the final payment being made July 30, 1923.

(*d*) The authorized and issued capital was changed in May, 1927, from 2,750,000 shares of $1.00 par value to 5,550,000 shares of "no par" value.

TABLE IX.—YEARLY DIVIDENDS AND BONUSES PAID BY GOLD MINING COMPANIES, 1912–1929

Year	Porcupine						Kirkland Lake				Total
	*Hollinger Consolidated	Porcupine Crown	†Dome Mines	Rea Consolidated	McIntyre	Vipond Consolidated	Tough-Oakes	Lake Shore	Wright-Hargreaves	Teck-Hughes	
	$	$	$	$	$	$	$	$	$	$	$
1912	270,000										270,000.00
1913	1,170,000										1,170,000.00
1914	1,170,000	240,000									1,410,000.00
1915	1,720,000	240,000	400,000.00	12,000			132,875				2,344,875.00
1916	3,126,000	240,000	800,000.00				265,750				4,591,750.00
1917	738,000	120,000	300,000.00		541,542.45						1,699,542.45
1918	1,230,000				543,042.45			100,000			1,873,042.45
1919	1,722,000				364,028.30			100,000			2,186,028.30
1920	2,214,000		416,886.00		546,042.45			80,000			3,256,928.45
1921	3,198,000		478,947.75		546,042.45			120,000			4,342,990.20
1922	3,198,000		715,000.50		546,042.45			80,000	412,500		4,951,542.95
1923	3,198,000		1,430,001.00		548,542.45			160,000	206,250		5,542,793.45
1924	3,198,000		1,906,668.00		774,125.00			380,000	206,250		6,465,043.00
1925	4,378,800		1,906,668.00		798,000.00			600,000	550,000		8,233,468.00
1926	5,805,600		1,906,668.00		798,000.00			1,000,000	893,750	474,714.40	10,878,732.40
1927	6,396,000		1,191,667.50		798,000.00	67,500		1,400,000	1,237,500	713,571.60	11,804,239.10
1928	5,412,000		953,334.00		798,000.00			2,000,000	825,000	2,860,286.40	12,848,620.40
1929	3,198,000		953,334.00		798,000.00			2,200,000		2,866,286.40	10,015,620.40
Total	51,342,400	840,000	13,359,174.75	12,000	8,399,408.00	67,500	398,625	8,220,000	4,331,250	6,914,858.80	93,885,216.55

*Includes $160,000 paid by the Acme in 1915 before amalgamation with the Hollinger.
†Exclusive of $476,667 repayment of capital in 1922.

RECEIPTS OF CRUDE GOLD BULLION FROM ONTARIO MINES AT THE ROYAL MINT, OTTAWA, 1925–1929

Year	Crude ounces	Precious Metals			Average Premium on New York Funds, per cent.
		Gold, fine oz.	Silver, fine oz.	Total Value $	
1925	139,130	105,888	19,130	2,201,974	0.03
1926	1,610,195	1,256,570	224,106	26,112,717	0.01
1927	1,721,111	1,338,192	229,657	27.793,399	0.05
1928	1,537,295	1,217,622	199,470	25,285,865	0.008
1929	412,058	328,556	54,068	6,821,876	0.068

The following figures summarize labour statistics as reported to the Ontario Department of Mines and Dominion Bureau of Statistics for the gold mining industry:—

AVERAGE YEARLY WAGE, ONTARIO GOLD MINING, 1929

Locality	No. of Wage earners	Wages paid	Average Wage per annum
		$	$
Porcupine	4,165	6,642,361	1,597
Kirkland Lake	2,134	3,579,462	1,679
Northwestern Ontario	163	220,614	1,354
Operating but non-producing	611	791,406	1,297
Total	7,073	11,233,843	1,588

Silver-Cobalt

Several encouraging features as regards the production of silver in Ontario have offset the continued decline in the output of the metal, e.g., the steady demand for cobalt with which the silver is associated, and the consequent reopening of several idle properties by lessees. Further, important discoveries of high grade ore made at the O'Brien mine at Cross lake, and deep development carried on at the Miller Lake O'Brien at Gowganda, have added to the lives of the properties concerned. The Cobalt Contact property at Cobalt developed bodies of both high grade silver and cobalt ore. High grade cobalt ore is being shipped from the Agaunico.

At Cobalt the more important active properties during the year were Nipissing, O'Brien, Mining Corporation, and Cobalt Contact. The Keeley, Frontier Lorrain, and Lorrain Trout Lake shipped from South Lorrain; while the Miller Lake O'Brien and Castle-Trethewey produced at Gowganda. Considerable development work was carried on at the Morrison and Silverado properties, also at Gowganda. Lessees at properties as enumerated below were shippers from the Cobalt area.

Badger	F. L. Chitty
Cobalt Comet (formerly Drummond)	H. Sequin
Coniagas	E. H. Clemens
Crown Reserve Dump	Geo Martin.
Foster-Cobalt	J. H. McLeod
Hudson Bay	W. H. Smith
Beaver (owned by C. E. Cain)	C. E. Cain
Kerr Lake	Arthur Brocklebank
La Rose (Lawson property)	T. E. Trembath
McKinley-Darragh-Savage	Goff Smith
Silver Queen	Newton and Herbert
Temiskaming	Sandoe and Moyle
Trethewey, Chambers-Ferland, and Aladdin Cobalt	J. W. Shaw et al.
Tudhope Tp.	Paramount Syndicate... (P. R. Craven)
Silver Leaf	Roper-Dreck-Desjardins

The low price of silver is a matter of great concern to the operators of silver mines in Ontario, inasmuch as the world situation from a buying point of view has made it extremely difficult for the producers to estimate future conditions. Depletion and selective mining have curtailed production and increased costs. The average price of silver for 1929 on the New York market was 52.993 cents per fine ounce, and the monthly average dropped from 57.019 cents in January to 48.475 cents in December. On December 30 on the London market the price dropped to a lower figure than prevailed in 1903 or before the Cobalt silver camp commenced producing.

Silver coinage introduced in Great Britain in 1928 was a quaternary alloy containing 50 per cent. silver, 40 copper, and 5 each of nickel and zinc, the novelty being the introduction of zinc. The Mining Magazine of London points out that with the decline in the use of silver for currency purposes, the market in that direction has been curtailed due to the increased adoption of the gold standard. On February 28, 1930, announcement was made that the government of India had placed an import duty on silver of 9 to 10 cents per fine ounce. This caused the New York price of the metal to decline to 40 7/8 cents per ounce, a new low record, and further depressed Chinese silver currency which is still standard in that country.

The output and shipments of silver in 1928 and 1929 are shown below. It should be pointed out that the figures given are based as nearly as possible on actual sales of bullion and silver contained in concentrates and residues exported, with the gross values as reported by the producers before deducting treatment and shipping charges. The figures for any one year do not agree with those in Tables X and XI:—

SILVER PRODUCTION, 1928–1929

Source	1928		1929	
	Fine Ounces	Value	Fine Ounces	Value
		$		$
Sales of bullion by the reduction companies, smelters, and mines	5,883,583	3,419,624	7,166,459	3,823,599
Contained in silver-cobalt concentrates and residues exported	804,871	462,946	804,081	416,381
Estimated as recovered from copper-lead-zinc concentrates exported	11,589	6,742	52,787	27,972
Estimated recoveries by Noranda smelter from Ontario copper ores	111	65	1,030	546
In crude gold bullion	248,226	137,366	257,745	134,697
Recovered by nickel-copper refineries	222,924	129,688	429,541	224,272
Total	7,171,304	4,156,431	8,711,643	4,630,820

TABLE X.—TOTAL SHIPMENTS FROM SILVER MINES, SMELTERS AND REFINERIES, 1904 TO 1929

Year	Bismuth		Copper(*a*)		Lead(*a*)		Nickel(*b*)		Cobalt(*c*)		Arsenic		Silver		Total Value
	Tons	Value	Tons	Value	Tons	Value	Tons	Value	Tons	Value	Tons	Value	Ounces	Value	
		$		$		$		$		$		$		$	$
1904....	....	....	....	....	....	....	14	3,467	16	19,960	72	903	206,875	111,887	136,217
1905....	....	....	....	....	....	....	75	10,000	118	100,000	549	2,693	2,451,356	1,360,503	1,473,196
1906....	....	....	....	....	....	....	160	....	321	80,704	1,440	15,858	5,401,766	3,667,551	3,764,113
1907....	....	....	....	....	....	....	370	1,174	739	104,426	2,958	40,104	10,023,311	6,155,391	6,301,095
1908....	....	....	....	....	....	....	612	....	1,224	111,118	3,672	40,373	19,437,875	9,133,378	9,284,869
1909....	....	....	....	....	....	....	766	....	1,533	94,965	4,294	61,039	25,897,825	12,461,576	12,617,580
1910....	....	....	....	....	....	....	504	....	1,098	54,699	4,897	70,709	30,645,181	15,478,047	15,603,455
1911....	....	....	....	....	....	....	392	....	852	170,890	3,806	74,609	31,507,791	15,953,847	16,199,346
1912....	....	....	....	....	....	....	429	14,220	934	314,381	4,166	80,546	30,243,859	17,408,935	17,818,082
1913....	....	....	....	....	....	....	377	13,326	821	420,386	3,663	64,146	29,681,975	16,553,981	17,051,839
1914(*d*)..	....	....	....	....	....	....	90	28,978	351	590,406	2,030	116,624	25,162,841	12,765,461	13,501,469
1915....	....	....	....	....	....	....	35	28,353	206	383,261	2,490	148,379	24,746,534	12,135,816	12,695,809
1916....	....	....	....	....	....	....	79	59,380	400	805,014	2,160	200,103	19,915,090	12,643,175	13,707,672
1917....	....	....	53	28,840	....	....	155	125,071	337	1,138,190	2,592	608,483	19,401,893	16,121,013	18,021,597
1918....	....	....	72	35,712	3	453	186	156,893	380	1,640,310	2,545	566,332	17,661,694	17,341,790	19,741,490
1919....	....	....	110	40,976	12	1,296	276	188,418	298	1,019,479	2,834	485,360	11,214,317	12,738,994	14,474,523
1920....	....	....	50	17,494	5	792	127	93,233	283	1,605,365	1,883	431,527	10,846,321	10,654,471	12,802,882
1921....	....	....	103	34,504	3	270	10	7,665	126	616,235	1,491	233,763	8,261,931	5,564,594	6,457,031
1922....	....	....	93	26,346	16	1,891	61	34,987	(*f*)776	1,333,676	2,059	299,940	10,711,127	7,658,802	9,355,642
1923(*e*)..	9	48,139	56	16,214	26	3,738	42	19,321	380	1,803,872	2,579	582,794	10,377,846	6,677,367	9,151,445
1924....	6	16,079	55	14,290	45	7,295	130	26,862	476	1,662,526	1,915	323,186	10,361,945	7,009,984	9,060,222
1925....	10	18,578	77	17,007	31	1,888	290	116,347	558	2,328,517	1,078	113,325	9,614,881	6,700,129	9,295,791
1926....	3	6,440	35	5,394	11	1,463	83	30,051	332	1,136,014	2,025	135,549	8,981,557	5,541,009	6,885,920
1927....	1	1,003	20	2,940	3	312	100	52,829	440	1,764,534	2,481	197,668	8,883,829	4,970,194	6,989,480
1928....	7	5,067	38	15,764	27	2,169	111	57,039	477	1,671,900	2,049	178,149	6,688,454	3,882,570	5,812,658
1929....	13	23,413	13	3,098	3	267	115	63,167	464	1,801,915	1,871	154,887	7,970,540	4,239,980	6,286,727
Total...	49	118,719	775	258,579	185	21,834	5,589	1,130,781	13,940	22,772,743	63,599	5,227,049	396,248,614	244,930,445	274,460,150

(*a*) Copper and lead are recovered from certain silver ores and concentrates shipped to United States refineries.
(*b*) Nickel metal and metallic contents of all nickel compounds.
(*c*) Cobalt metal and metallic contents of all cobalt compounds, also in ores and speiss residues exported.
(*d*) Prior to 1914 an estimate based on assays was made of the nickel, cobalt and arsenic in the ores. Since that date recoveries have been reported.
(*e*) Recoveries of bismuth from base bullion were not reported prior to 1923.
(*f*) Includes 460 tons of speiss residues worth $153,116.

The following table shows statistics based on the metal contents of shipments of ore and concentrates and should not be confused with the figures in the main table on page 2 and Table X immediately preceding. Silver shown as shipped in the following table is compiled for each mining area and is mainly the silver contents of ore or concentrates shipped to the reduction works at Cobalt or the silver smelters. Of necessity there is a lag and it does not follow that all the ores, etc., shipped have received treatment during the year by smelters, although in the yearly aggregate, and more particularly over a period of years, these figures will agree closely with those for silver bullion sold, as given in the table on page 2 and also in Table X.

Since the discovery of silver at Cobalt in 1903 the silver contents of shipments from this camp and outlying silver areas, as reported by the operators, have been as follows:—

TABLE XI.—SILVER SHIPMENTS BY CAMPS, 1904–1929

Year	Average price, cents per ounce (New York)	Silver Content in Troy Ounces					
		Total Ounces	Cobalt	Casey Township	South Lorrain	Gowganda	Montreal River and Maple Mountain
1904	57.221	206,875	206,875	....	....	....	....
1905	60.352	2,451,356	2,451,356	....	....	....	....
1906	66.791	5,401,766	5,401,766	....	....	....	....
1907	65.237	10,023,311	10,023,311	....	....	....	....
1908	52.864	19,437,875	19,424,251	500	13,124	....	....
1909	51.502	25,897,825	25,658,683	26,185	194,955	....	18,002
1910	53.486	30,645,181	29,849,981	92,544	221,133	471,688	9,835
1911	53.340	31,507,791	29,989,893	114,789	933,912	468,687	510
1912	60.835	30,243,859	28,605,940	253,824	834,119	549,976	....
1913	57.791	29,681,975	28,105,505	825,108	248,992	502,370	....
1914	54.811	25,162,841	24,155,699	499,643	108,199	399,300	....
1915	49.684	24,746,534	24,280,366	223,939	....	242,229	....
1916	65.661	19,915,090	19,008,517	445,900	77,280	383,393	....
1917	81.417	19,401,893	18,327,258	....	10,000	1,064,635	....
1918	96.772	17,661,694	16,807,407	143,901	72,188	638,198	....
1919	111.122	11,214,317	10,314,689	171,278	4,586	723,764	....
1920	100.900	10,846,321	10,402,249	....	8,253	433,352	(*a*) 2,467
1921	62.654	8,261,931	7,673,535	1,101	328,886	258,292	117
1922	67.528	10,711,127	9,239,147	1,028	1,284,307	170,651	(*b*) 15,994
1923	64.873	10,377,846	7,259,858	....	2,955,646	160,761	1,581
1924	66.781	9,935,902	6,704,787	....	2,633,058	598,057	....
1925	69.065	10,707,235	6,252,115	....	3,099,964	1,355,156	....
1926	62.107	10,543,473	6,262,249	....	3,044,584	1,236,640	....
1927	56.370	8,543,513	4,482,543	....	2,319,356	1,741,614	....
1928	58.176	6,745,401	3,934,020	....	1,133,952	1,677,429	....
1929	52.993	7,781,429	4,823,529	....	876,006	2,081,894	....
Total	....	398,209,198	359,800,366	2,799,740	20,402,500	15,158,086	48,506

(*a*) Includes 885 ounces from Silver Islet, Lake Superior.
(*b*) Silver Islet, Lake Superior.

In addition to the silver content of ores, concentrates, residues, etc., producing mines are paid for the cobalt content provided the percentage is sufficiently high. Mine shippers in 1929 were paid $179,292 for 641,005 pounds of cobalt, and $3,098 for 26,731 pounds of copper. These figures for copper represent only the portion paid for by United States smelters. It was estimated that 52,118 pounds were recovered.

From monthly statements, issued by Mr. A. A. Cole, mining engineer of the Temiskaming and Northern Ontario Railway, showing railway shipments of ore, concentrates, etc., from the Cobalt area, the following information has been compiled: Total shipments, 4,851.00 tons, of which 2,354.22 were consigned to Deloro and Smiths Falls, 1,440.39 to United States smelters and refineries, and 1,056.39 tons to Europe.

Shipments of silver mines by camps during 1929 were as follows:—

	Silver, oz.	Cobalt*	
		Quantity, lb.	Value, $
Cobalt	4,823,529	441,587	151,006
Gowganda	2,081,894	72,112	11,185
South Lorrain	876,006	127,306	17,101
Total	7,781,429	641,005	179,292

*Figures represent the quantities paid for by the smelters, and values received by the mines.

The producers of silver are given in the following list:—

SILVER PRODUCERS IN 1929

Operator	Mine or Source	Location
Cobalt Camp.		
Agaunico Cobalt Mines, Ltd	Agaunico	Bucke tp.
Cobalt Contact Mines, Ltd.	Cobalt Contact	Bucke tp.
La Rose Mines, Ltd	La Rose	Coleman tp.
Nipissing Mining Co., Ltd	Nipissing	Coleman tp.
Mining Corporation of Canada, Ltd	Buffalo, Townsite, City of Cobalt, Cobalt Lake	Coleman tp.
O'Brien, M. J., Ltd	O'Brien and Cross Lake	Coleman tp.
Cobalt Reduction Co., Ltd	Reduction plant	Coleman tp.
16 Leases	*See* page 14	
Gowganda.		
Castle-Trethewey Mines, Ltd	Castle	Haultain tp.
O'Brien, M. J., Ltd	Miller Lake-O'Brien	Haultain tp.
Pioneer Prospectors Cons. Mines, Ltd	Pioneer	Leith tp.
South Lorrain.		
Keeley Silver Mines, Ltd	Keeley	Silver Centre, So. Lorrain
Lorrain Trout Lake Mines, Ltd	Lorrain Trout Lake	Silver Centre, So. Lorrain
Frontier (Lorrain) Mines, Ltd	Frontier	Silver Centre, So. Lorrain

TABLE XII.—OPERATIONS OF ONTARIO SILVER-COBALT REFINERIES IN 1929

Products marketed		Sales	
		Quantity	Value
			$
Silver bullion	fine oz.	5,799,396	3,083,000
Arsenic, white	lb.	3,402,592	134,392
Arsenic, other forms	"	296,278	19,614
Cobalt products, including metals and metallic content of all oxides, mixed oxides and salts	"	701,425	1,663,953
Nickel oxide, and salts (metal content)	"	193,940	56,590
Base bullion *(a)*	"	125,037	99,127
Speiss residues *(b)*	"	361,000	73,449
Bismuth	"	5,979	8,207
Total			5,138,332

(a) Contains silver, lead, bismuth and antimony.
(b) Speiss residues contain silver, cobalt, nickel and arsenic.

TABLE XIII—DIVIDENDS AND BONUSES PAID BY SILVER MINING COMPANIES TO DECEMBER 31, 1929

Name of Company	Date of Incorporation	Authorized Capital	Capital Stock Issued	Par value per share	Dividends and Bonuses paid to end of 1928	Dividends and Bonuses paid during 1929	Total Dividends and Bonuses paid to 31st Dec., 1929	Date when last Dividend was paid
		$	$	$	$	$	$	
Aladdin Cobalt Company, Limited	Aug. 23, 1912	500,000	500,000	5.00	75,000.00		75,000.00	Apr.. 30, 1917
Beaver Consolidated Mines, Ltd.	Mar. 1, 1907	2,000,000	2,000,000	1.00	710,000.00		710,000.00	May 31, 1920
Buffalo Mines, Ltd., The (*a*)	April 27, 1906	500,000	500,000	.50	2,787,000.00		2,787,000.00	May 28, 1924
Casey Cobalt Silver Mining Co., Ltd.	Dec. 19, 1906	100,000	100,000	1.00	203,249.33		203,249.33	April 22, 1914
Castle-Trethewey Mines, Ltd. (*b*)	Jan. 20, 1922	2,000,000	2,000,000	1.00	18,027.00		18,027.00	April 15, 1925
Cobalt Central Mines Co., Ltd.	Dec. 13, 1905	5,000,000	5,000,000	1.00	192,845.00		192,845.00	Aug. 25, 1909
Cobalt Comet Mines, Ltd. (*c*)	April 16, 1913	1,000,000	1,000,000	1.00	230,000.00		230,000.00	April 1, 1915
Cobalt Silver Queen, Ltd.	April 1, 1906	1,500,000	1,500,000	1.00	315,000.00		315,000.00	Dec. 31, 1908
Coniagas Mines, Limited, The	Nov. 24, 1906	4,000,000	4,000,000	5.00	11,440,000.00		11,440,000.00	May 1, 1924
Crown Reserve Mining Co., Ltd	Jan. 16, 1907	2,000,000	1,999,957	1.00	6,190,849.00		6,190,849 00	Dec. 28, 1916
Foster Cobalt Mining Co., Ltd	Feb. 14, 1906	1,000,000	915,588	1.00	45,000.00		45,000.00	Jan. 1, 1907
Hudson Bay Mines, Ltd	July 16, 1909	3,500,000	3,200,050	5.00	778,909.42		778,909.42	Aug. 31, 1913
Keeley Silver Mines, Ltd.	June 22, 1922	2,000,000	2,000,000	1.00	2,240,000.00		2,240,000.00	Mar. 15, 1928
Kerr Lake Mining Company, Ltd. (*d*)	Aug. 9, 1905	40,000	40,000	100.00	10,521,000.00		10,521,000.00	Oct. 13, 1927
La Rose Mines, Ltd	May 31, 1908	1,500,000	1,500,000	1.00	6,600,546.84		6,600,546.84	Mar. 24, 1923
Lorrain Trout Lake Mines, Ltd	Mar. 20, 1923	1,500,000	1,500,000	1.00	150,000.00		150,000.00	July 15, 1925
McKinley-Darragh-Savage Mines of Cobalt, Ltd.	April 27, 1906	2,500,000	2,247,692	1.00	5,955,391.86		5,955,391.86	Oct. 1, 1920
Mining Corporation of Canada Ltd.	Nov. 23, 1916	8,300,250	8,300,250	5.00	7,158,924.97	415,012.50	7,573,937.47	Dec. 19, 1929
City of Cobalt Mining Co., Ltd (*e*)	Jan 7, 1909	1,500,000	1,500,000	1.00	145,000.00		145,000.00	April 15, 1920

TABLE XIII—*Continued*

Name of Company	Date of Incorporation	Authorized Capital	Capital Stock Issued	Par value per share	Dividends and Bonuses paid to end of 1928	Dividends and Bonuses paid during 1929	Total Dividends and Bonuses paid to 31st Dec., 1929	Date when last Dividend or Bonus was paid
		$	$	$	$	$	$	
Cobalt Lake Mining Co., Ltd. (*e*)	Dec. 22, 1906	3,000,000	3,000,000	1.00	465,000.00	....	465,000.00	May 29, 1914
Cobalt Townsite Mining Co., Ltd. (*e*)	May 8, 1906	100,000	45,011	1.00	1,042,259.61	....	1,042,259.61	Nov. 11, 1914
Nipissing Mining Co., Ltd. (*f*)	Dec. 16, 1904	250,000	250,000	100.00	30,288,297 25	390,000.00	30,678,297.25	Dec. 31, 1929
Penn-Canadian Mines, Ltd. (*g*)	April 24, 1912	1,500,000	1,349,705	1.00	175,461.65	....	175,461.65	Sept. 10, 1917
Peterson Lake Silver-Cobalt Mining Co., Ltd.	April 11, 1906	3,000,000	2,469,802	1.00	462,350.35	....	462,350.35	Jan. 2, 1917
Right of Way Mines, Ltd	Sept. 11, 1909	2,000,000	1,685,500	1.00	252,825.00	....	252,825.00	Mar. 17, 1917
Right of Way Mining Co., Ltd.	July 13, 1906	500,000	499,518	1.00	324,643.93	....	324,643.93	Oct. 1, 1909
Seneca-Superior Silver Mines, Ltd.	Sept. 29, 1911	500,000	478,884	1.00	1,579,817.20	....	1,579,817.20	Dec. 15, 1916
Temiskaming Mining Co., Ltd.	Nov. 5, 1906	2,500,000	2,500,000	1.00	2,159,156.25	....	2,159,156.25	Jan. 31, 1920
Temiskaming and Hudson Bay Mining Co., Ltd.	July 10, 1903	25,000	7,761	1.00	1,940,250.00	....	1,940,250.00	Nov. 10, 1914
Trethewey Silver Cobalt Mines, Ltd.	May 30, 1906 June 1, 1911	2,000,000	1,000,000	1.00	1,211,998.50	....	1,211,998.50	Jan. 2, 1919
Wettlaufer Lorrain Silver Mines, Ltd.	Nov. 30, 1908	1,500,000	1,416,590	1.00	637,465.50	....	637,465.50	Sept. 22, 1913
Total (*h*)	....	....	....	......	96,296,268.66	805,012.50	97,101,281.16	....

(*a*) In 1917 the capital stock of the company was reduced from $1,000,000 to $750,000, in 1918 from $750,000 to $500,000, and on December 21, 1919, from $500,000 to $150,000, but returning to shareholders amounts equal to the reduction in capital, leaving 300,000 shares issued of 50 cents each. The mine was sold to the Mining Corporation of Canada, and operated by it in 1920 and subsequently.

(*b*) 200,000 preferred shares, par $1.00, redeemed April, 1925, and capital reduced from $2,200,000 to $2,000,000.

(*c*) Cash assets amounting to $50,000 paid on April 27, 1917.

(*d*) In addition a return of capital amounting to $600,000 was made on July 3, 1919, to stockholders of the Kerr Lake Mines, Ltd.

(*e*) Mining Corporation of Canada, Limited, now owns and operates the City of Cobalt, Cobalt Lake and Cobalt Townsite mines.

(*f*) Includes $16,288,297.25 paid in dividends by the Nipissing Mines Co. (the holding company) to the end of 1916.

(*g*) Paid out of capital $40,491.15 on September 10, 1917, and an equal amount on April 24, 1918.

(*h*) Does not include dividends by private companies such as M. J. O'Brien, Ltd.

Nickel, Copper, and Platinum Metals

Expansion and development of the nickel-copper industry has been reported in every annual statement since 1925, but the increase in production in 1929 over the previous year is the greatest yet recorded. As compared with 1928 ore raised has increased 36.6 per cent., ore smelted 37.7, and matte produced 44.6 per cent. An interesting feature during the past four years, as will be noted in the table, has been the rapid increase in the quantity of matte refined in Ontario. This advance of 228 per cent. has coincided with the improved refining facilities at Port Colborne. This record of the nickel-copper industry, which is really the story of the operations of the International Nickel Company of Canada, Limited, has been the outstanding development in metal mining in the Province for the year under review. It will be recalled that the amalgamation of the International and Mond companies became effective January 1, 1929.

The table following gives the record of mining and smelting operations for the last pre-war year, for the war year of maximum output, and for the past four years:—

TABLE XIV.—NICKEL-COPPER MINING AND SMELTING, 1925–1929

Schedule		1925	1926	1927	1928	1929
Ore raised	tons	1,264,748	1,322,050	1,305,917	1,457,910	1,991,910
Ore smelted	"	1,258,849	1,309,782	1,350,214	1,476,704	2,033,457
Bessemer matte produced	"	70,280	78,643	81,848	91,313	132,030
Nickel content	"	36,596	39,038	39,623	43,393	58,095
Copper content	"	19,636	24,159	25,969	29,704	46,315
Matte exported*	"	32,397	34,908	33,541	39,310	28,402
Nickel content	"	36,596	39,038	39,623	43,393	14,068
Copper content	"	19,636	24,159	25,969	29,704	8,449
Matte refined in Canada	"	38,567	33,489	39,253	67,866	109,818
Men employed	No.	2,650	3,132	3,418	3,845	4,546
Wages paid	$	3,487,051	4,359,066	4,919,445	6,005,697	7,069,995

*All matte was exported prior to 1918 when refining in Canada began at Port Colborne, Ontario. The British America Nickel Corporation commenced refinining operations at Deschênes, Quebec, in 1920, and closed down finally in July, 1924.

Refineries.—During the year at Port Colborne, the International Nickel Company of Canada recovered electrolytic and refined nickel; nickel oxide; converter copper; platinum, palladium and other metals of the platinum group in the form of residues; also the precious metals, gold and silver. The record for 1928 and 1929 is shown in the subjoined table:—

TABLE XV.—NICKEL-COPPER REFINING, 1928–1929

Schedule		1928		1929	
		Quantity	Value	Quantity	Value
			$		$
Matte, treated	tons	67,866	....	109,818	....
Nickel oxide, marketed	lb.	12,445,951	2,877,739	14,400,198	3,347,983
Metallic nickel, recovered	"	49,142,644	12,595,814	70,704,762	18,639,814
Blister copper, recovered	"	41,609,160	5,937,153	74,265,747	11,880,306
Gold, recovered*	ounces	3,850	79,586	4,420	91,370
Silver, recovered*	"	222,924	129,688	349,632	181,861
Platinum metals, recovered*	"	23,539	1,309,923	29,615	1,646,381
Employees	No.	797	....	1,302	....
Wages paid	$	....	1,298,778	....	2,098,550

*Includes recoveries by the Mond division at Clydach in Wales.

As mentioned already, matte treated in Ontario has grown very rapidly following the installation of new electrolytic units at the Port Colborne refinery. The first unit was placed in operation in 1926, the second in September, 1928, the third in December of that year, and a fourth in February, 1929. These four units together have a capacity of 3,600,000 pounds of electrolytic nickel per month. Three additional units are contemplated, each with a monthly capacity of 1,200,000 pounds. One of these was put in operation in 1929, and another is now practically completed and part of it in operation. Converter copper is also produced. The gold and silver metals follow the copper, but platinum and its associated metals (palladium, rhodium, ruthenium, osmium, and iridium) are recovered as a residue in the electrolytic refining of nickel. In the future the refining and separating of these platinum metals will be done entirely at the refinery and research laboratory of the company located at North Acton, a suburb of London, England, where a process has been evolved much in advance of the former methods used for refining platinum metals on this side of the Atlantic.

TABLE XVI.—PRECIOUS METALS RECOVERED, 1925–1929

	1925	1926	1927	1928	1929	
	Ounces	Ounces	Ounces	Ounces	Ounces	Value, $
Gold*	4,016	4,447	4,866	3,850	7,802	161,282
Silver	134,390	151,429	188,180	222,924	429,541	227,625
Platinum metals:						
Platinum	8,692	9,471	11,217	10,452	12,474	843,928
Palladium	7,856	9,790	11,247	11,389	12,231	464,778
Rhodium, Ruthenium, Osmium and Iridium	432	234	298	1,689	4,910	337,675
Total . . . ounces	16,980	19,495	22,762	23,539	29,615	. . . .
Value . . . $	1,675,706	1,559,527	1,270,843	1,309,923	. . . . . .	1,646,381

*Includes small recoveries of the rhodium group by the Mond Nickel Company.

The average price obtained for platinum in 1929 was $67.655 and for palladium $38.00 per fine ounce. Prices of the rarer platinum metals fluctuate so widely that average prices are difficult to secure. Figures used for valuation purposes in 1929 were: rhodium, $50; ruthenium, $48; and iridium, $241.

Dividends.—Payments in 1929, and total dividends paid to the end of 1929 are given in the table which follows. For convenience of comparison Mond figures have been converted to dollars on the basis of £1 = $4.8665.

TABLE XVII.—TOTAL DIVIDENDS PAID BY NICKEL COMPANIES

Company		Period (inclusive)	Total to end of 1928	†Paid in 1929	Total to end of 1929
Canadian Copper Company		1894-1901	$1,975,000	....	....
*International Nickel Co.	Preferred	1906-1928	12,299,273	$1,712,097	....
	Common	1909-1928	65,811,694	12,375,704	....
Total		....	$80,085,967	$14,088,701	$94,174,668
Mond Nickel Company	Deferred	1906-1914	£264,043	....	....
	Preferred	1904-1928	2,381,359	£175,000	....
	Ordinary	1905-1928	2,352,818	229,166	....
Total		....	£4,998,220	£404,166	....
		or	$24,324,249	$1,966,877	$26,291,126
Grand Total		....	$104,410,216	$16,055,578	$120,465,794

*Successors to the Canadian Copper Company. The International Nickel Company paid dividends on the common stock from 1909 to 1919, inclusive, and again from 1925 to 1928, inclusive. Common stock outstanding was $41,834,600, and preferred stock $8,912,600, or a total of $50,747,200 at the beginning of 1928. On December 19, 1928, the authorized capital stock of $62,000,000 of the New Jersey company was reduced by changing the par value of the shares from $25 to $1 each, and at the same time the name of the company was changed to "Nickel Holdings Corporation." On December 31, 1928, the authorized capital was further reduced to $993,425 fully issued or subscribed for stock consisting of $843,700 preferred stock and $149,725 common stock, par value in each case.

†Upon completion of the exchange of stock under the amalgamation of the Mond and International companies, effective December 31, 1928, stock issued or issuable was as follows: $27,627,825 of 7 percent. cumulative preferred, and 13,758,208 common shares without par value. Dividends paid by the International Nickel Company of Canada, Limited, on the common stock in 1929 were 90c. per share. Dividends paid on February 16, 1929, by the Mond company cover the 8 months period ending December 31, 1928.

Development.—The extensive programme of construction by the International company, which has been under way at Sudbury, comprising bins, concentrators, roasters, and reverberatory furnaces, also a new copper refinery under erection by the Ontario Refining Company, are expected to be completed by midsummer, 1930. The concentrator capacity has been enlarged to 8,000 tons daily. The electrolytic copper refinery will also treat custom blister copper, gold and silver concentrates, precipitates and bullion. It will have a capacity of 20,000,000 pounds of copper per month, and the plant occupies over 11 acres of ground at Copper Cliff.

Part of the present smelter equipment will be used to carry out the first stage of refining now done at Port Colborne, namely, the separation of the molten Bessemer matte into copper tops and nickel bottoms, using nitre cake. The tops will be further treated at Copper Cliff to produce blister copper, which will go to the new refinery in which the International company has a 42½ per cent. interest, while the bottoms will be shipped to Port Colborne. Thus, copper and nickel refining will be concentrated at Copper Cliff and Port Colborne, respectively. It is expected the new plant at Copper Cliff will be ready for the transfer by the autumn of 1931.

This great addition to the metallurgical plants of Ontario has been the outcome of the development of the Frood ore deposit, the lower levels of which are much higher in copper than in nickel.

During February, 1930, the combined working forces engaged in mine and smelter operations and construction at the various mines and plants of International Nickel Company of Canada, in the Sudbury district, reached a new high level with a total of 8,839 men drawing wages. The forces represented by these figures are engaged in operation of the Frood, Creighton, and Garson mines, and in plant construction for International Nickel at Copper Cliff and Levack, and also for the Ontario Refining Company and Canadian Industries, Limited, at Copper Cliff. During 1929 these interests distributed approximately $1,000,000 per month in wages. About 2,000 men are employed at the Frood. In addition the Port Colborne refinery of the International employs nearly 1,500 men.

It should not be overlooked that the Frood is only one of a group of mines including the Creighton, Garson, and Levack, operated by the International Nickel Company, not to mention the ownership of thousands of acres of mineral lands located along the rim of the nickel belt. In addition to the copper and nickel content of the Frood ore, important values in precious metals (gold, silver, and platinum metals) are present. The Frood deposit has been opened by two shafts (International and Mond) to a depth of 3,050 and 3,350 feet, respectively, which have been connected on the 2,400-foot and 2,800-foot levels. The ore shipped from this mine goes to the Coniston and Copper Cliff smelters. The Creighton, Frood and Levack served both smelters, while the Garson ore was delivered to Coniston only. A fire which broke out at the Levack mine headframe and rockhouse on December 15 resulted in a considerable monetary loss, and caused a temporary cessation of mining operations there. Ore shipments from these properties in 1929 were as follows:—Creighton 1,177,323, Levack 367,686, Garson 246,049, and Frood 199,852 tons. Shipments from the last mentioned were largely from development. In 1929 the Coniston smelter treated 726,511 tons and Copper Cliff 1,306,946 tons of ore.

A new company, Falconbridge Nickel Mines, Ltd., has started production. The smelter was completed at the end of the year and was blown in February 5, 1930. Initial smelter capacity is 250 tons daily. The annual report of the company states that down to the 1,000-foot level there are 1,367,000 tons of ore, averaging 2.97 per cent. nickel and 0.97 copper. Refining of Falconbridge matte will be done at Kristianssands, Norway. Several other companies did development work on nickel prospects, including Sudbury Offsets, Limited, which carried on an extensive diamond-drilling campaign in Foy township with encouraging results.

Nickel.—Total nickel produced in Ontario, that is, the metal content of all nickel-bearing substances in 1929, was as follows:—

Nickel in various forms	Quantity	Value
	lb.	$
Metallic	25,260,177	6,821,814
Electrolytic	45,444,585	11,818,000
In nickel-copper matte exported	28,136,095	5,064,496
In oxide (Port Colborne)	11,204,577	3,347,983
In speiss residues (Deloro)	36,538	6,577
In oxides, salts, etc. (Deloro)	193,940	56,590
Total	110,275,912	27,115,460

The world's nickel production was less than 5,000 tons per year prior to 1890. Commencing in 1896 the production rose rapidly until 1918, the peak war year, when 45,886 tons were produced in Ontario alone. It fell during 1921 and 1922 to about 9,000 tons, but has since risen rapidly and with the exception of the year 1925 has shown large increases every year. Ontario's output for 1925 and subsequently is shown in Table XIV. In post-war years the output of metal from New Caledonia, the next largest producer, has approximated 4,000 tons per year.

The consumption of nickel has kept pace with the growing output, and is expected to expand in the future as new uses are developed. It is significant that in pre-war times ordnance and naval armaments took 60 per cent. of the nickel production while to-day this has been reduced to about 10 per cent. Now 32 per cent. goes into nickel steels, and other industrial applications have displaced war uses. There is now wide diversification in the use of nickel: e.g., structural nickel steel, the application of nickel steel and alloys to motor cars, roller bearings which formerly used no nickel are now manufactured with nickel steel; corrosion resisting nickel-chrome alloys (so-called stainless steels), ornamental metal work, ferro-nickel alloys, nickel in iron castings where strain is expected, non-ferrous alloys such as decorative metals in railway coaches, and in nickel plating. The percentages of nickel consumption in the several fields as given in 1927 by Robt. C. Stanley, President of the International Nickel Company, follow:—

Structural nickel-steel	35	Coinage	2
Monel metal	20	Copper-nickel alloys	2
Nickel silver	15	Edison storage batteries	2
Nickel plating	5	Corrosion-resistant steels	1
Heat resisting electrical alloys	5	Nickel cast iron	1
Malleable nickel	5	Nickel catalyzers	1
Nickel-steel castings	2	Nickel-bronze	1
Ferro-nickel alloys	2	Miscellaneous alloys	1

Copper.—Heretofore this metal has been reviewed in conjunction with the nickel-copper industry of which it forms an important part. The construction of a new copper refinery at Copper Cliff to handle Canadian blister copper in a customs way, and the stimulated development of the strictly copper mines of the Province, may necessitate separation of copper from nickel for statistical purposes.

The details of copper production in 1929 follow:—

Source	Quantity	Value
	lb.	$
Metal content of Port Colborne converter copper	70,835,430	11,880,306
In nickel-copper matte exported	16,898,515	2,534,777
In Cobalt ores exported*	52,118	9,437
In Ontario ore treated at Noranda smelter	104,955	19,004
In lead-zinc-copper concentrate exported	989,041	179,085
Total	88,880,059	14,622,609

*Figures are estimated recoveries, not metals paid for.

In Ontario five copper properties made small shipments to the Noranda smelter during the period, amounting to 663.77 tons of ore containing 12 ounces of gold, 659 ounces of silver and 113,593 pounds of copper. The figures shown in the table above make allowances for losses in smelting. These properties, which are not as yet equipped with concentrators, were the Amity, Patterson, Mindoka and Potter-Doal, the latter having re-commenced shipping in December. All are served by the T. & N.O. Railway. The Tip Top mine of the Shield Development Company at Kashabowie, west of Port Arthur, shipped a test carload.

Heavy Chemicals.—Canadian Industries, Ltd., which operates a contact process sulphuric acid plant at Coniston, has built a new one at Copper Cliff costing $1,500,000. In each case, the raw products used are sulphur fumes from blast furnace operations of the International company. The Coniston plant consists of 3 units, each with a daily capacity of 30 tons of sulphuric acid. The new Copper Cliff plant has three 50-ton units, and two of these were in operation in September, 1930. A large part of the sulphuric acid will be used for the production of nitre cake required for the separation of nickel and copper. Sodium sulphate from Saskatchewan is treated with sulphuric acid, and by a new process evolved by Canadian Industries, Limited, the action is accelerated and the resulting product is cast into moulds, an improvement on the old method by which nitre cake was available only in irregular broken fragments.

Statistical Synopsis.—The principal statistics covering the nickel-copper industry as published for the first time in Ontario reports show that the actual capital invested in Ontario in mines, smelters, refineries, etc., totalled $134,713,333, and the total selling value of products as they left the Province to have been $43,386,989. The total of salaried officials was 198, and wage earners, including those employed in building and construction by the company as well as by contractors, was nearly 8,500. Details are shown in the table on the opposite page.

Lead-Zinc-Copper

Ontario has only one lead smelter, namely, the plant near Galetta owned and operated by the Kingdon Mining, Smelting and Manufacturing Company. The ore is galena in a calcite gangue. During 1929 this smelter produced 4,201,803 pounds of lead valued at $266,596 from 102,000 tons of ore mined. In addition to the above, small quantities are recovered from base-bullion at Deloro in the smelting of silver-cobalt ores, and also from the Treadwell-Yukon concentrate exported. The total lead from all sources in 1929 was 4,769,506 pounds valued at $294,431, as against 6,814,757 pounds worth $402,289 in 1928.

Zinc was derived entirely from the Treadwell-Yukon ores. Occasionally the Kingdon smelter ships zinc-bearing concentrate, slags and drosses, but none were reported in 1929. During the year the total estimated recoverable production was 5,516,806 pounds valued at $297,190.

The lead-zinc-copper section of the industry at present is represented by the Treadwell-Yukon Mining Company only, with a well developed property at Bradley, about 17 miles west of Sudbury. The property is now served with a branch railway line 6 miles in length, which was opened for traffic on October 29. There are three classes of concentrates produced by this company, predominating in lead, zinc, and copper, respectively. At present these are exported for treatment.

PRINCIPAL STATISTICS OF THE NICKEL-COPPER INDUSTRY IN ONTARIO DURING 1929*

Number of producing companies	Number of plants	Capital invested	Dividends paid	Salaried employees		Wage-earners		Selling value of products	
				No.	Salaries	No.	Wages	Kind	$
		$	$		$		$		$
1	4 mines	90,628,544		32	115,775	2,973	4,694,920	Matte (exported)	7,599,274
	2 smelters	25,993,232	16,055,578	80	281,774	1,573	2,375,075	Metallic nickel	18,639,814
								Nickel oxide	3,347,983
	1 refinery (Port Colborne)	18,091,557		86	255,923	1,302	2,098,550	Converter copper	11,880,306
								Gold	161,282
								Silver	227,625
	Construction†					2,619	3,306,061	Platinum metals	1,646,381
Total		134,713,333	16,055,578	198	653,472	8,497	12,474,606		43,502,665

*The figures do not include non-producing companies. Falconbridge Nickel Mines, Limited, did not commence smelting until February, 1930.

†Workers engaged by contractors for the International Nickel Company of Canada, Limited.

Iron Ore, Pig Iron, Steel, Ferro-Alloys, and Coke

To stimulate mining of iron ore in the Province an Act entitled *The Iron Ore Bounty Act, 1930,* was passed in the Ontario Legislature during the 1930 session. By the terms of the Act, the government will grant as a bonus or bounty the sum of one cent per unit of metallic iron contained in each long ton of Ontario ores mined or raised in the Province for a period of 10 years, provided such ore (natural or beneficiated) is smelted or treated in Ontario. A similar Bill was passed in 1924, granting one-half cent per unit subject to an equal Federal grant being made, but this condition was not implemented and the Act was never proclaimed. The new Act will be proclaimed when the occasion arises.

No Ontario ore has been smelted since 1925, as will be noted in the following table of iron and steel statistics for the past five years:—

TABLE XVIII.—IRON AND STEEL STATISTICS, 1925–1929

Schedule	1925	1926	1927	1928	1929
Ontario ore smelted......short tons	6,830	....	....	....	....
Foreign ore smelted...... "	732,356	948,154	1,019,971	1,242,937	1,491,278
Limestone for flux....... "	109,198	218,996	217,748	324,550	342,776
Coke.................. "	262,344	503,871	478,825	736,746	767,420
Pig iron produced........ "	412,837	545,737	515,366	822,952	861,682
Value of pig iron produced........$	8,048,992	9,805,300	9,663,108	15,468,110	17,408,514
Steel made..............short tons	529,327	534,732	635,173	885,414	1,007,784
Value of steel made..............$	18,904,520	16,710,365	18,695,950	30,436,098	32,393,052

As shown in Table XVIII, foreign ore charged was 1,491,278 tons, from which a total of 861,682 tons of pig iron were made having a value of $17,408,514. The output consisted of 534,393 tons of basic, 228,284 tons of foundry, and 99,005 tons of malleable iron. Basic was valued at $20.75 per long ton, foundry at $25.75, malleable at $25.56, and steel at $36.00.

IRON BLAST FURNACES IN OPERATION, 1929

Name of Company	Furnaces			Location
	No.	Daily capacity, long tons	Days operated	
Algoma Steel Corporation, Ltd. (*a*)........	2	1,600	365	Sault Ste. Marie
Steel Company of Canada, Ltd.............	2	825	365	Hamilton
Canadian Furnace Company, Ltd. (*b*)......	1	300	223	Port Colborne

(*a*) In July and August, 3 furnaces. (*b*) Closed February 11 to June 10.

BLAST FURNACES IN ONTARIO FOR THE PRODUCTION OF PIG IRON

Company	Location	Furnaces		Remarks
		No.	Daily capacity gross tons	
Algoma Steel Corporation, Ltd......	Sault Ste. Marie..	4	1,600	Active
Atikokan Iron Company...........	Port Arthur......	1	175	Idle since 1911
Canadian Furnace Co., Ltd.........	Port Colborne....	1	300	Re-opened May 25, '28
Canadian Steel Corporation, Ltd....	Ojibway (near Windsor)......	2	1,100	Partly constructed.
Midland Iron and Steel Co., Ltd....	Midland.........	1	120	Idle since Feb., 1921
Parry Sound Iron Co., Ltd.........	Parry Sound.....	1	90	Idle since Oct. 1, 1919
Standard Iron Co., Ltd............	Deseronto.......	1	60	Idle since June 9, 1919
Steel Company of Canada, Ltd......	Hamilton........	2	825	Active.

Note.—The first and last mentioned companies produce open-hearth steel as well as pig iron.

Steel and Ferro-Alloys.—Steel ingots to the amount of 889,807 long tons were made in Ontario by five companies. Of these 857,455 tons were basic open hearth for use in the manufacturing plants of the makers.

Direct steel castings derived by the open hearth basic, crucible, and electric process, totalled 23,068 long tons, of which 18,383 long tons were electric and the balance open hearth basic and converter.

Ferro-alloys were made by four companies and included ferro-manganese and ferro-silicon. The total output amounted to 80,010 long tons.

PIG IRON, STEEL AND FERRO-ALLOY PRODUCERS

Company	Location
Abrasive Company of Canada, Ltd. (*c*)	Hamilton
Algoma Steel Corporation, Ltd. (*a*), (*b*)	Sault Ste. Marie
Canadian Carborundum Co., Ltd. (*c*)	Niagara Falls
Canadian Electric Castings Co., Ltd. (*b*)	Orillia
Canadian Furnace Co., Ltd. (*a*)	Port Colborne
Carbon and Alloy Steel Co., Ltd. (*b*)	Welland
Dominion Foundries and Steel, Ltd. (*b*)	Hamilton
Electro Metallurgical Co. of Canada, Ltd. (*c*)	Welland
Exolon Co., Ltd. (*c*)	Thorold
London Rolling Mills Co., Ltd. (*b*)	London
Steel Company of Canada, Ltd. (*a*), (*b*)	Hamilton
Superior Alloys, Ltd. (*c*)	Sault Ste. Marie
Union Carbide Co. of Canada, Ltd. (*c*)	Welland
Welland Steel Castings, Ltd. (*b*)	Welland
Wm. Kennedy & Sons, Ltd. (*b*)	Owen Sound

(*a*) Pig iron; (*b*) steel; (*c*) ferro-alloys.

Coke.—The Algoma Steel Corporation at Sault Ste. Marie, and the Steel Company of Canada at Hamilton, produce coke in conjunction with their blast furnace operations, while the Hamilton By-Products Coke Ovens, Ltd., also at Hamilton, produces coke for domestic purposes, having commenced in January, 1924. The figures of production below do not include the output from municipal gas plants. The materials used and products consumed and sold by the coke plants in Ontario during 1929 are shown in the subjoined table:—

THE COKING INDUSTRY IN ONTARIO, 1929

	Unit	Quantity	Value
MATERIALS USED			
Bituminous coal, foreign	tons	1,843,737	7,621,308
Coke for gas making	"	11,118	27,795
Oil for gas making	Imp. gals.	94,904	11,270
Lime	tons.	1,512	14,274
Water		....	15,156
Sulphuric acid, 66° Be.	lb.	33,535,020	219,879
All other materials		....	26,391
Total		....	7,936,073
PRODUCTS MADE			
Coke	tons	1,292,150	9,296,015
Coke breeze	"	88,810	160,165
Gas sold and used	M cu. ft.	14,444,375	2,957,791
Tar	Imp. gals.	13,014,003	894,754
Ammonium sulphate	lb.	39,761,539	699,926
Light oils	Imp. gals.	4,593,383	657,930
All other products		....	1,295
Total		....	14,667,876

NON-METALLIC MINERALS

During 1929 the value of the output of non-metallic minerals totalled $8,621,427 as against $7,822,641 in 1928, or an increase of 10.2 per cent. The principal items, with values in order of importance, were as follows: Natural gas, $4,968,137; salt, $1,420,424; gypsum, $832,689; quartz and quartzite, $316,050; petroleum, $253,678; feldspar, $206,979; talc, $180,492; and arsenic, $154,887. Actinolite, beryl, fluorspar, graphite, iron pyrites and sulphuric acid (i.e. sulphur content), mica, mineral water, peat, and silica brick were represented, but were all under $100,000 each in value, as may be seen in Table 1 in the list of non-metallics.

Actinolite

This mineral, which is a variety of asbestos, has been mined in Hastings county in a small way since 1883. It is mainly exported to the United States in ground form where it is used as an ingredient in the manufacture of roofing material. In 1929 the output was 30 tons valued at $375 as against 70 tons worth $875 in 1928.

Arsenic

Arsenic in the native state is a metallic mineral, but since it is produced in Ontario in the oxide form, called in the trade "white arsenic", it has been customary to include it under the non-metallics. The whole production is recovered in the smelting of the silver-cobalt arsenides of northern Ontario by the Deloro Smelting and Refining Company. Including the arsenic produced as insecticides and also contained in speiss residues exported to the United States for treatment, the production in 1929 was 3,742,913 pounds valued at $154,887 as against 4,097,226 pounds worth $178,149 in the previous year.

Barite

This mineral has not appeared in the production table since the year 1923. Several deposits are known to exist, and one in the Porcupine gold area, Canada Nighthawk Mines, Limited, is equipped with milling facilities. The main difficulty, however, for domestic producers is the limited home market and the high duty to be met on entry into the United States.

Beryl

This mineral occurs in fine green crystals on the property of T. B. Caldwell, Perth, Ont., located on lot 23, concession 15, Lyndoch township, in the county of Renfrew. No production apart from hand specimens was reported from this property for a number of years, but in 1927 some 4,456 pounds of beryl were shipped to Germany, the c.i.f. value of which at Hamburg was $175. This production was not reported until the year 1929.

Coal (Lignite)

On the James Bay coastal plain, in the valleys of the Abitibi and Mattagami rivers, recent investigations by W. S. Dyer, geologist on the staff of the Ontario Department of Mines, have definitely established an extensive Cretaceous basin, in which formation coal measures are found in other parts of Canada. Its existence was first suggested by the late Joseph Keele in discussing the origin of the Mattagami River fire clays and china clays, and appeared in his report to the Ontario Department of Mines, published in 1920. The presence of lignite at Blacksmith rapids on the Abitibi river has been known for years, but its geological age was formerly thought to be later than Cretaceous. To determine the extent of the deposit a diamond-drilling programme was begun in the summer of 1929 by the Provincial government under the supervision and direction of the Ontario Department of Mines, with the result that up to September, 1930, about 3 square miles of lignite, in a bed averaging about 20 feet in thickness, has been delimited. The deposit extends from the Abitibi to the Onakawana, a parallel stream, and continues to the west for an undetermined distance. The grade, from tests so far made, is similar to Southern Saskatchewan lignite which finds a ready market in Winnipeg in the raw state as domestic fuel, and is also being carbonized and briquetted successfully.

Two test shafts have now been sunk, one on the bank of the Abitibi and the other beside the Onakawana river, from which test shipments have been made. The lignite was solid and free from fines, partings or mud seams. The overburden is principally boulder clay, 50 to 100 feet in thickness. It is expected this new fuel, suited to domestic and industrial use, will prove a boon to Northern Ontario. Diamond-drilling to further delimit the extent of the field is proceeding west of the Onakawana, a euphonious Indian word which has been adopted as a trade name for the new fuel. By Order-in-Council the Ontario Government has withdrawn from staking large areas adjoining the Mattagami and Abitibi rivers.

The T. & N. O. Railway Commission has let the contract for a 45-mile extension of the Cochrane-James Bay line from the present terminus on the Abitibi river at Coral Rapids (mile 97). The extension was built during the summer of 1930, passing through the new lignite field and terminating at Murray island on the Moose river, only 45 miles from Moose Factory. Construction of a bridge across the Moose is now under way, and the remaining 45 miles of railway along the northwest bank of the river to tide water at Moose Factory will be constructed during the summer of 1931.

Feldspar

During 1929 the production of feldspar was up by 2,783 tons, accounted for by steady exports of crude to the United States, as well as to an increasing consumption of ground spar in Canadian manufactured products. The figures were 21,737 tons valued at $206,979 for 1929 as against 18,954 tons worth $180,153 in 1928. These figures include $34,121 and $22,432, respectively, as increases in value due to grinding in a domestic plant. Only one feldspar grinding plant, apart from the production of stucco, was active, namely the Frontenac Floor and Wall Tile Company at Kingston where the finely ground product is used in the manufacture of high-grade floor and wall tile as well as supplying other producers of porcelain whiteware. There were six feldspar producers during the period of which the Bathurst Feldspar Mines, Limited, and the Genesee Felsdpar Company, Incorporated, were the most important, producing around 8,000 tons each.

During 1929 some of the smaller operators were forced to discontinue mining because the United States market was cut off due to a feldspar merger in the United States. In the Bulletin of a year ago reference was made to the new Consolidated Feldspar Corporation which acquired the Dominion and New York feldspar grinding mills located at Rochester, N.Y., leaving only the Genesee mill as an independent purchaser of Canadian feldspar. In 1929 another merger was effected, known as United Feldspar Corporation. The Feldspar Grinder's Institute, formed July 15, 1929, immediately took up the question of standardization of product with the result that grinders, users, and the U.S. Bureau of Standards came to an agreement in February, 1930, at the Convention of the American Ceramic Society in Toronto, to adopt grade standards based on chemical analysis. This is expected to iron out many of the difficulties which have existed heretofore between producer and consumer. Three groups of spar were established, namely, body, glaze and glass. One feature of the industry is the rapidly expanding use of spar in glass manufacture, about one-third of the U.S. output now finding a market in the glass trade. The Feldspar Glass Company at Oshawa made progress in improving its electrical furnace for bottle glass manufacture, using feldspar largely as a raw product, and hopes to be marketing its product in the near future.

Fluorspar

During 1928 and 1929, a small production of fluorspar was picked from the old ore dumps on lot 3, concession 1, of Madoc township, totalling 70 tons having a value of $1,120. The last reported production from the same area was in the year 1925.

Graphite

The only producer of this mineral in Ontario was the Black Donald Graphite Company, Limited, of Calabogie, from its property on lots 17, 18 and 19, concession III of Brougham township in Renfrew county. During 1929 sales of all grades totalled 1,288 tons valued at $90,522, as against 1,047 tons worth $52,373 in the previous year. During the year 3,734 tons of ore were mined, of which 2,948 tons received treatment. Material on hand at the end of the year was 800 tons crude and 235 tons refined.

Gypsum

During 1929, Canada Gypsum and Alabastine, Ltd., of Paris, the only producer of gypsum in Ontario, extended its operations considerably by acquiring limestone quarries and lime kilns in various parts of Canada. In this province the following were taken over in March:

1. Stone quarry and lime kilns of the Beachville Lime & Stone, Ltd. (successor to Standard White Lime Co. and Beachville White Lime Co., Ltd.).
2. Stone quarry and lime kilns in Nassagaweya township, Halton county, from D. Robertson and Son, Ltd.
3. The Limehouse plant owned by the Toronto Lime Co., Ltd.
4. The Puslinch, Kelso and Hespeler plants of the Christie-Henderson Lime Co., Ltd.

As a result of this extension of operations, the name of the organization was changed in January, 1930, to bring it more in accord with the extended business of the company, and to include lime which is now a major product. The renamed company, "Gypsum, Lime and Alabastine, Canada, Limited," is now the leading producer in Canada of high calcium lime, magnesium lime, limestone and chemical limestone. The great development of its business in the last few years has placed the company in the position of being the second largest shipper over Canadian railway lines.

Gypsum mills in Ontario are located at Lythmore and Caledonia in Haldimand county. Production for the past five years follows:—

GYPSUM SALES, 1925–1929

Grade	1925	1926	1927	1928	1929
Crushed.......................tons	24,830	37,769	29,832	20,675	23,533
Fine ground.................. "	548	1,110	621	1,134	497
Calcined sold................. "	8,337	3,098	856	4,133	5,269
Calcined used in products...... "	48,305	48,010	52,689	59,869	71,048
Total sold or used.............tons	82,020	89,987	83,998	85,811	100,347
Total value.......................$	491,833	496,059	500,688	553,271	832,689

Iron Pyrites and Sulphuric Acid

There was only one producer of iron pyrites in Ontario during 1929, namely, Canadian Pyrites, Ltd., which shipped 156.56 tons of lump and 520.78 tons of fines from the Caldwell mine near Flower Station. This material contained 38 and 42 per cent. sulphur, respectively, and was valued at $8,506. In the main table the sulphur content of pyrites is included with the sulphur contained in the sulphuric acid recovered from sulphur dioxide fumes at the Coniston smelter of the International Nickel Company of Canada, Limited, giving a total of 4,579 tons of sulphur worth $51,516.

Canadian Industries, Ltd., which has taken over the Mond sulphuric acid plant at Coniston, constructed at Copper Cliff during 1929 an additional plant for making sulphuric acid, and also a chemical plant for the production of nitre cake. The bulk of the sulphuric acid will be used to treat sodium sulphate from Saskatchewan to produce nitre cake which the Company is under contract to supply to the International Nickel Company of Canada. Active research work is being carried on to develop the further utilization of smelter fumes.

The contact process plant at Coniston was placed in operation by the Mond Nickel Company in November, 1925. To W. H. DeBlois credit is due for adapting the contact process to treat sulphur dioxide fumes with impurities in the form of dust. Mr. DeBlois is now in charge of both plants. The Coniston plant consists of 3 units, each with a capacity of 30 tons of acid per day. The new Copper Cliff plant also consists of 3 units, but they are of 50 tons capacity each. Two of these units were in operation in September, 1930. Both vanadium and platinum catalysts are being tried out to ascertain which is the more efficient.

Mica

The production of mica in Ontario increased slightly during 1929 but the industry, due to lack of markets, is not in a flourishing condition. During the period 2,991 tons of mica, principally scrap, valued at $45,919 were shipped from the mines and by dealers as against 2,559 tons worth $32,945 in 1928. Only 250 tons of ore were reported as mined while shipments were reported by six operators. The total number of employees reported was 16 who earned $5,533, but these figures do not take into account those engaged in part time work.

By grades the shipments were as follows:—

Grade	Pounds	Value
		$
Thumb-trimmed	85,470	10,620
Scrap	5,896,640	35,299
Total	5,982,110	45,919

The thumb-trimmed, which in size varies from 1 inch by 1 inch to 5 inches by 8 inches, brought the following prices:—

Size, inches	Cents per lb.	Size inches	Cents per lb.
1 by 1	7–14	2 by 4	50—60
1 by 2	15–20	3 by 5	$1.00—$1.25
1 by 3	18–27	4 by 6	$2.00—$2.50
2 by 2	22	5 by 8	
2 by 3	28–55		

MICA SHIPPERS, 1929

Name of Owner or Producer	Location or Name of Mine	P.O. Address of Manager, etc.
Bennett, H. V.	Buyer of mica	Perth
Burke, Jas.	“ “	Perth
Kent Bros., and Estate of J. M. Stoness	“ “	Kingston
Lee, W. W.	“ “	Bedford Mills
Loughborough Mining Co.	“ “	Sydenham
Martin, A. G.	“ “	236 Besserer St., Ottawa
McLaren, W. L.	Lots 4, 5, 6, con. VIII, N. Burgess tp.	Box 20, Perth

Mineral Waters

The companies producing mineral waters in 1929 were as follows:—

PRODUCERS OF MINERAL WATERS, 1929

Name of Owner, Firm, or Company	Location of Spring or Well	P.O. Address of Manager, etc.
*Canada Dry Ginger Ale, Ltd.	Gloucester and Clarence tps.	6380 St. Urbain St., Montreal
Carlsbad, Ltd.	Carlsbad Springs	Carlsbad Springs, Que.
Denault, F.	Lot 22, con. IV, Clarence tp.	Bourget.
Goderich Mineral Water Co.	Goderich	Goderich.
Gurd & Co., Ltd., Charles	Caledonia tp.	1016 Bleury St., Montreal.
Sanitaris, Ltd.	Lot 27, con. XII, Pakenham tp.	Arnprior.

*Formerly Caledonia Springs Co., Ltd.

The following table records shipments in Imperial gallons since 1921 of mineral water with valuation in bulk form at the works:—

Sales	1921	1922	1923	1924	1925	1926	1927	1928	1929
Imp. gals.	308,647	209,072	227,030	201,670	183,012	208,400	293,200	253,630	309,700
Value $	14,438	10,528	14,047	13,133	25,452	27,277	12,811	27,890	13,651

Natural Gas

Production of natural gas in Ontario in 1929 was 8,583,187 thousand cubic feet, with a retail value of $4,968,133, according to the report (Vol. XXXIX, Part V) by R. B. Harkness, Natural Gas Commissioner. Production in 1928 was 7,632,740 thousand cubic feet. For fuller details the special report above mentioned should be consulted. Labour employed by the industry totalled 1,323 persons who received $1,529,367 in wages.

Peat

The output of 1,000 tons worth $4,500 f.o.b. plant, as reported in Table I, was from stock pile at the Alfred peat plant near Ottawa. No operations were carried on other than shipping, and saleable fuel on hand at the end of the year was estimated at 2,000 tons.

Petroleum

A report on "Petroleum in 1929," by the Natural Gas Commissioner, appears in Vol. XXXIX, Part V. One statistical table, which is repeated here for convenience, taken from the above-mentioned report, is as follows:—

CRUDE PETROLEUM PRODUCTION BY FIELDS, 1925-1929

Field	1925*	1926	1927	1928	1929
	Bbls.	Bbls.	Bbls.	Bbls.	Bbls.
Petrolia, and Enniskillen township	53,166	55,485	60,172	60,547	56,284
Oil Springs	39,137	38,350	37,281	35,653	30,737
Moore township	8,195	2,438	2,014	2,148	1,230
Sarnia township	1,905	1,890	1,679	1,221	749
Plympton township	1,424	1,047	493	371	315
Bothwell	26,243	25,382	25,224	24,255	23,236
Dover, West } Tilbury	2,957	959	602	773	715
Tilbury, East } Tilbury		....	60	736	138
Raleigh township	887	676	276	....	....
Onondaga township	261	361	210	186	243
Mosa township	8,397	7,868	7,456	7,268	6,851
Thamesville	289	2,376	4,139	1,006	427
Euphemia township	39	....	....	....	....
Dunwich township	1,001	139	....	....	148
Romney township	1,235	....	....	....	....
Brooke township	....	....	....	....	52
Total production.....Bbls.	144,249	136,971	139,606	134,164	121,125
Value.....$	369,154	376,822	289,390	249,981	253,678
Average price per bbl.....$	2.56†	2.73	2.11	1.86	2.09

*Figures to July 1, 1925, supplied by the Supervisor of Petroleum Bounties at Petrolia.

†A bounty of 26¼ cents per barrel (35 Imperial gallons), or a total of $20,152, was paid in 1925 by the Federal Government under the "Petroleum Bounty Act" up to July 1, when the Act ceased to operate. This bounty was in addition to the values above quoted.

Refining of oil and the manufacture of oil refinery products were carried on during 1929 by four companies in Ontario, as follows:—

PETROLEUM REFINERIES, 1929

Company	Head Office	Plant	Days Operated
British American Oil Company, Ltd.	1312 Royal Bank Bldg., Toronto	Toronto	304
Canadian Oil Refineries, Ltd.	Toronto	Petrolia	365
Imperial Oil Refineries, Ltd.	445 South Christina St., Sarnia	Sarnia	365
McColl Bros., Ltd.	114 Don Esplanade, Toronto	Toronto	365

In 1929 only 1.35 per cent. of the crude oil distilled by these companies was of Ontario origin.

Quartz, Quartzite, and Silica Brick

The output of quartz in 1929 totalled 187,973 tons valued at $316,050 as compared with 194,503 tons worth $308,608 during the previous year, showing a slight increase in value but a decrease in quantity. Four operators were active during the period employing 94 men who received $78,489 in wages.

The largest producer is the Dominion Mines and Quarries, Limited, which operated its Killarney quarry on the north shore of Lake Huron. The East Neebish quarry, operated in former years by this company, was idle during the period. The International Nickel Company (Mond Division) reported production, all of which was crushed to 1½-inch size and consumed at the Coniston smelter, as a flux.

Wright and Company of Sault Ste. Marie were producers, part of their output going to supply raw material required in silica brick manufacture by the Algoma Steel Corporation for consumption in their own plants. During 1928 there were 1,566,199 silica brick made having a value of $80,374.

A list of the producers follows:—

QUARTZITE, QUARTZ AND SILICA BRICK PRODUCERS, 1929

Name of Owner, Firm or Company	P.O. Address of Operator	Location of Quarry
Algoma Steel Corporation, Ltd.	Sault Ste. Marie	*
Dominion Mines and Quarries, Ltd.	Toronto, Canada Life Bldg.	Killarney.
International Nickel Company, Ltd.	Copper Cliff	Neelon tp.
Rayner, G. W.	Toronto, 151 Roxboro St. E.	Deroche tp.
Wright and Company	Sault Ste. Marie	Deroche tp., Mile 19, A.C.Ry.

*Producers of silica brick. Quartz supplied by Wright and Company.

Salt

The production of salt and brine from southwestern Ontario by six salt and two chemical plants in 1929 shows an increase over 1928. Canadian Industries, Limited, at Sandwich, and Brunner, Mond Canada, Limited, at Amherstburg, use salt brine for the manufacture of chemicals such as bleaching powder, liquid chlorine, muriatic acid, caustic soda and soda ash. The first four products mentioned are manufactured at Sandwich, the output from Amherstburg being caustic Soda and soda ash. Canadian Industries Limited, a subsidiary of Imperial Chemical Industries, Limited, of London, England, purchased the assets of the Canadian Salt Company, Limited, on November 11, 1928. The output of other alkali chemicals by the Canadian Salt Company and its successor has lately developed to an extent where it has become more important than the basic production of salt. The Windsor salt plant of this company has been dismantled.

Salt plants were operated in 1929 at Sandwich, Sarnia, Goderich, Kincardine and Courtright. The entire output is from salt wells in the form of brine, no salt being mined in Ontario.

Analysis of the figures in the table shows a slight falling off in salt sales, but an increased use of brine in chemical plants. The output of salt by grades for the past five years, also the total value, exclusive of packages or containers, are shown in the table which follows:—

SALT STATISTICS, 1925–1929

Schedule		1925	1926	1927	1928	1929
Land	tons	5,125	3,965	4,599	3,621	1,919
Coarse	"	33,197	31,192	25,216	26,730	22,632
Fine	"	43,286	47,202	47,185	51,055	49,869
Table and Dairy	"	46,602	50,461	53,477	56,214	54,138
Pressed Blocks	"	4,605	6,505	7,709	7,083	5,560
Brine (salt equivalent)	"	93,500	113,020	115,995	135,138	168,327
Total sold or used	"	226,470	252,345	254,180	279,841	302,445
Value of products sold or used	$	1,466,450	1,388,672	1,510,777	1,377,629	1,420,424
Employees	No.	*467	*466	290	299	263
Wages	$	555,729	614,790	322,549	337,214	303,618

*Employees of Sandwich salt and chemical works are included.

OPERATING SALT COMPANIES, 1929

Name of Owner, Firm or Company	Location of Wells or Works	P.O. Address of Manager, etc.
Brunner, Mond Canada, Limited	Amherstburg*	Amherstburg.
†Canadian Salt Company, Limited, The	Sandwich*	Sandwich.
Dominion Salt Company, Limited, The	Sarnia	Sarnia.
Exeter Salt Works Company, Limited	Exeter	Exeter.
Goderich Salt Company, Limited	Goderich	Goderich.
Kincardine Salt Company, Limited	Kincardine	Kincardine.
Western Canada Flour Mills Company, Limited	Goderich	Goderich.
Western Salt Company, Limited	Courtright	Courtright.

*Chemical works using salt brine as raw material.
†Now, the heavy chemical division of the Canadian Industries, Ltd.

Talc and Soapstone

Production from the two Ontario producing properties during 1929 was slightly higher than in 1927 or 1928. During the period 17,703 tons of ore were mined and 17,403 tons milled, from which 15,463 tons of different grades valued at $180,492 were marketed. The Geo. H. Gillespie Co., Ltd., at Madoc, as usual, treated ore from the Henderson mine; while the Canada Talc Company, Ltd., formerly known as the Asbestos Pulp Co., Ltd., operated its mine and mill, also at Madoc. The several grades of refined product varied in price from $9.00 to $18.00 per ton. Markets were found in Canada, United States and Great Britain. During the year the soapstone properties situated at Eagle lake in Kenora district were closed down. Following are statistics of talc and soapstone for the past five years:—

TALC AND SOAPSTONE STATISTICS, 1925–1929

Schedule	1925	1926	1927	1928	1929
Soapstone shipped .... tons	64	110	135	....	....
Ground talc shipped .... "	13,614	14,772	15,003	14,925	15,463
Total value shipments .... $	174,116	178,986	181,981	179,187	180,492
Employees, mine and mill ...... No.	51	50	61	45	42
Wages paid .... $	47,971	47,083	51,834	44,858	40,055

STRUCTURAL MATERIALS

Construction Contracts

The value of Canadian construction contracts awarded for 1929 reported by *McLean Building Review* was $576,651,800 as compared with $472,032,600 in 1928. Ontario contracts in 1929 amounted to $215,773,100 or 37.4 per cent. of the total. Building costs have been stable for the past few years and material prices are considerably below the peak of 1920. It is expected that prices will remain stabilized at or near the present levels and, while there may be some fluctuations in the cost of building materials, no important reductions in building costs appear likely in view of higher wages.

VALUE OF ONTARIO CONSTRUCTION CONTRACTS, 1924–1929

Classification	1924	1925	1926	1927	1928	1929
	$	$	$	$	$	$
Residential	43,090,000	47,529,600	52,084,100	57,580,800	64,628,600	59,211,000
Business	27,706,000	32,579,800	38,808,200	81,328,100	58,700,200	82,949,000
Industrial	7,017,000	3,754,700	21,126,900	11,922,500	25,109,800	28,247,200
Engineering	58,228,000	37,381,000	29,910,200	45,327,600	39,913,100	45,365,900
Total	136,041,000	121,248,100	141,929,400	196,159,000	188,351,700	215,773,100

Building Permits

Building permits in 61 Canadian cities in 1929 were valued at $234,944,549. Of this total thirty Ontario cities accounted for $95,055,827 or 40.5 per cent., as noted in the following table abstracted from *Annual Review of Building Permits in Canada in 1929,* issued by the Dominion Bureau of Statistics, Department of Trade and Commerce, Ottawa.

BUILDING PERMITS IN ONTARIO, 1920–1929

Year	30 Ontario Cities, Value	Prices Index No. (*a*)	Toronto Metropolitan Area, (*b*) Value	Wages Index No. (*c*)
	$		$	
1920	58,636,365	144.0 (*d*)	30,049,413	180.9
1921	59,315,845	122.8	31,979,346	170.5
1922	81,396,259	108.7	36,405,625	162.5
1923	74,673,080	111.9	39,530,877	166.4
1924	57,330,141	106.6	29,636,428	169.1
1925	59,888,867	102.9	32,408,636	170.4
1926	65,373,757	100.0	31,588,124	172.1
1927	79,883,344	96.1	37,316,511	179.3
1928	104,777,566	98.1	59,817,568	185.6
1929	95,055,827	99.0	57,522,927	197.5

(*a*) Applies to average index numbers for Canadian wholesale prices of building materials on the basis of 1926 = 100, as compiled by Dominion Bureau of Statistics. In 1913 the index was 67.0, dropping to a low of 60.5 in 1915.

(*b*) Includes York and East York municipalities.

(*c*) Average index numbers of wages in Canadian building trades as compiled by the Federal Department of Labour on the basis of 1913 = 100.

(*d*) Peak year.

Cement

During 1929 the plants in operation were those of the Canada Cement Company, Limited, located at Belleville, Port Colborne, and Lakefield; and that of the St. Marys Cement Company, Limited, at St. Marys. Production for the last pre-war year and subsequently is given in the following table:—

PORTLAND CEMENT STATISTICS, 1913–1929

Year	No. of Operating Plants	Sales		
		Barrels (350 lbs.)	Total Value	Average Price per bbl.
			$	$
1913	13	3,802,321	4,105,455	1.08
1914	11	2,665,650	2,931,190	1.10
1915	7	2,302,242	2,534,537	1.10
1916	7	2,143,949	2,242,433	1.15
1917	6	2,063,231	2,934,271	1.43
1918	4	1,226,244	1,910,839	1.56
1919	5	2,022,575	3,659,720	1.81
1920	5	2,035,594	3,377,814	2.15
1921	5	2,723,072	6,425,266	2.37
1922	4	3,104,386	6,235,370	2.01
1923	4	3,296,428	5,855,590	1.77
1924	4	3,564,499	5,668,671	1.59
1925	4	3,462,358	5,253,911	1.52
1926	3	3,398,860	4,792,857	1.41
1927	4	3,751,786	5,144,326	1.34
1928	4	3,911,795	5,520,897	1.41
1929	4	4,624,712	6,608,246	1.43

It should be noted that sales in 1929 were the greatest on record. In the annual statement of the Canada Cement Company, Limited, for the fiscal year ending November 30th, 1929, mention is made of the generally prosperous business conditions that prevailed throughout Canada during 1929 as responsible for a better demand for cement. A specially constructed self-discharging vessel of 3,500 tons capacity was put in operation in September to supply maritime storage and shipping points with cement and bring back gypsum from Nova Scotia for use in Eastern Canada cement plants.

Cement Products.—In recent years the industry of cement products manufacture in Ontario has assumed considerable importance. Since 1924 no data have been included in the tables of mineral production since the raw materials entering into the manufacture of these products have all been accounted for. But readers have pointed out that, being so closely allied to the building industry, statistics of cement products should be included so that complete information covering all structural materials might be available under one cover. The following table gives the record of materials used and products made by cement products manufacturers during the past 3 years in Ontario. Monolithic construction is not included.

PRODUCTION OF CEMENT PRODUCTS IN ONTARIO, 1928–1929*

	1928		1929	
	Quantity	Cost at Works	Quantity	Cost at Works
MATERIALS USED		$		$
Portland cement.....bbls.	195,105	401,648	275,049	472,957
Quicklime.....bu.	641	305	7,619	3,595
Sand.....cu. yds.	42,499	66,176	59,012	110,180
Gravel..... "	66,572	110,545	116,509	107,641
Crushed stone..... "	20,693	65,243	12,740	47,232
Cinders.....tons		22,818		43,715
Boxes, crates, lumber, etc.....		18,806		21,326
Other materials.....		51,100		161,940
Total.....		736,641		968,586
PRODUCTS MADE				
Cement brick.....M.	2,597	39,947	649,801	178,247
Hollow building blocks, etc.....		779,462		560,022
Drain pipe.....		124,088		51,878
Sewer and culvert pipe.....		746,438		957,325
Artificial stone.....		379,202		497,539
Cement posts, poles, etc.....		9,319		4,975
Cinder blocks (cincrete).....M.	950	190,158	2,209	305,893
Other products.....		173,103		234,560
		2,441,717		2,790,439

*Supplied by Dominion Bureau of Statistics, Ottawa.

The cement products industry is comprised of a number of small operations principally, although a few of them are fairly extensive, requiring substantial plants. Many of them, however, are organized for temporary operations to fill a local demand that has arisen. As a result the number of plants fluctuates from year to year as may be seen in the accompanying table. On the other hand, wages paid and value of products have steadily increased, indicating that the well-organized establishments have a steady and expanding business.

PRINCIPAL STATISTICS OF CEMENT PRODUCTS INDUSTRY, 1925–1929*

	1925	1926	1927	1928	1929
Plants..........................No.	148	133	109	105	106
Wage-earners (average).........No.	507	474	481	590	767
Salaries and wages................	411,836	439,487	468,371	617,503	897,481
Cost of fuel......................$	30,751	33,391	29,257	39,669	49,974
Capital invested..................$	2,068,497	2,168,758	1,888,102	2,501,018	3,031,747
Value products at works..........$	1,499,938	1,583,437	1,685,050	2,441,717	2,664,372

*Supplied by Dominion Bureau of Statistics, Ottawa.

Lime

The period under review was one marked by several changes in the ownership of lime-producing plants. Early in 1929 Canada Gypsum and Alabastine, Limited, bought a number of operating kilns. In addition to the originally owned plants, namely Teeswater and Elora (the former being dismantled early in the year), this company bought out the Beachville Lime and Stone Company, Limited, which was a consolidation of the Beachville White Lime Company and the Standard White Lime Company of Guelph; the Puslinch, Kelso and Hespeler plants of the Christie Henderson Company, the Rockwood and Limestone plants of the Toronto Lime Company (the Rockwood kilns have not been active for a number of years), and the Halton county lime plant of D. Robertson & Company, Ltd. The acquisition of the above plants, which are among the important ones of the province, has placed the company, now known as "Gypsum, Lime and Alabastine, Canada, Limited," prominently in the lime business.

During 1929 some twenty-six establishments were active, employing 577 men to whom $398,266 was paid in wages. Six of these plants are equipped for the production of hydrated lime. Total lime sales were 370,162 tons, valued at $3,364,412. Figures of production for the past five years are given in the table which follows:—

LIME STATISTICS, 1925–1929

Year	Lime Marketed or Used						Fuel Costs	Employees	Wages
	Hydrated			Quicklime					
	Tons	Value		Bush. (70 lbs.)	Value				
		Total	Per Ton		Total	Per Bush.			
		$	$		$	c.	$		$
1925..	41,610	477,585	11.47	5,115,882	1,566,540	30.6	375,220	409	436,867
1926..	39,217	457,978	11.68	5,402,261	1,593,468	29.5	396,128	414	397,988
1927..	44,749	540,687	12.08	5,668,087	1,657,552	29.2	386,284	451	458,001
1928..	49,085	597,367	12.17	6,517,170	1,870,476	28.7	388,152	414	390,611
1929..	55,916	740,127	13.24	8,978,465	2,624,285	29.2	513,741	577	398,266

For statistical purposes the information on lime is divided among the various consuming industries and for 1929 the figures were as follows:—

Consumption	Quicklime		Hydrated lime	
	Bushels	Value	Tons	Value
		$		$
Building Trades	651,460	197,173	39,617	491,796
Chemical Works	6,633,971	1,942,318	309	3,399
Metallurgical and Glass	460,975	126,698	63	725
Pulp and Paper	235,728	65,565	50	575
Sugar Refining	228,459	67,755	....	....
Tanneries	50,416	13,743	54	594
Agriculture	486	135	535	5,737
Dealers	505,649	155,752	15,276	237,156
Others	211,321	55,146	12	145
Total	8,978,465	2,624,285	55,916	740,127

LIME PRODUCERS, 1929

Name of Owner or Company	Location of Kilns	Head Office Address
American Cyanamid Co.[1]	Niagara Falls	Niagara Falls.
Beachville White Lime Co., Ltd.[2]	Beachville	Beachville.
Biederman, Albert G.	Wilberforce tp.	Golden Lake.
Brunner, Mond Canada, Limited[1]	Anderdon tp., near Amherstburg.	Toronto, Bank of Commerce Building.
Canada Gypsum and Alabastine, Ltd.[3]	Elora[4] and Teeswater[5]	Paris.
Canada Lime Co.	Coboconk and Sand Point.	Toronto, 465 Bay St.
Cameron, W. M.	Carleton Place	Carleton Place.
Chalmer's Lime Works	Owen Sound	Owen Sound.
Christie, Henderson & Co., Limited[2]	Hespeler,[4] Puslinch, Kelso, Galt.	Toronto, 201 Crown Office Building.
Dominion Sugar Company[1]	Chatham and Wallaceburg.	Chatham.
Dominion Rock Products, Ltd	Eganville	Montreal, 1017 New Birks Bldg.
Gallagher Lime and Stone Co., Ltd.	Barton tp.	Hamilton.
Jamieson Lime Co.	Renfrew	Renfrew.
Kinkley, Harry	Napanee	Napanee.
Robertson & Co., Ltd., D.[2]	Nassagaweya tp.	Toronto, 26 Queen St. E.
Shane Lime Co.	Grattan tp.	Eganville.
Standard White Lime Co., Limited[2]	Beachville, Guelph,[4] St. Marys and Rockwood.	Guelph, 15 Douglas St.
Toronto Brick Co., Ltd.	Coboconk	Toronto, 897 Bay St.
Toronto Lime Co., Ltd.[2]	Dolly Varden	Toronto, 26 Queen St. E.
Weppler, Henry	Glenelg tp.	Priceville, R.R. No. 2.

[1] Product from high calcium limestone used in manufacture of chemicals and sugar.

[2] Bought by Canada Gypsum and Alabastine, Ltd.

[3] Name changed to Gypsum, Lime and Alabastine, Canada, Ltd. See reference under "Gypsum."

[4] Hydrated lime plants.

[5] Dismantled in 1929.

Sand-Lime Brick

In 1929 the output of sand-lime brick was 55,750 M worth $641,159 as against 61,506 M valued at $745,719 in the previous year. These figures include the value of the lime consumed in manufacturing. The figure for value as shown in Tables I and II is the total selling price without any deduction, since the small duplication in value will in part compensate for sand produced by many part time operators from whom no reports are received.

The following table shows statistics for the past five years, also the comparative average values of common clay brick:—

SAND-LIME BRICK STATISTICS, 1925–1929

Year	No. of operating plants	No. of wage-earners	Wages	Sales				Average value per M of common clay brick
				M.	Total selling value	Average value per M	Value with lime cost deducted	
			$		$	$	$	$
1925.....	8	202	213,556	66,506	820,893	12.34	677,103	15.28
1926.....	8	178	171,747	46,869	555,847	11.86	461,376	15.18
1927.....	7	199	224,535	61,380	721,485	11.75	600,750	15.83
1929.....	7	183	205,497	61,506	745,719	12.12	624,228	15.83
1929.....	6	190	228,576	55,750	641,159	11.50	540,299	15.84

All the active plants in 1929 were located in Toronto or vicinity. The list follows:—

SAND-LIME BRICK PRODUCERS, 1929

Name of Company	Toronto Address
Canada Sand-Lime Pressed Brick Co., Ltd.	28 Symes Rd.
Harbour Brick Co., Ltd.	Fleet St., at Bathurst.
Hinde Bros.	134 Northlands Ave.
*Leaside Brick and Sand Co., Ltd.	York Bldg.
Toronto Brick Co., Ltd.	897 Bay St.
York Sandstone Brick Co., Ltd.	447 Victoria Park Ave.

*Closed down September 4, 1929.

Sand and Gravel

The sand and gravel industry of Ontario of late has developed into an important section of mineral production, accounting in 1929 for over three million dollars of the value of products. Apart from licensed operators, *i.e.*, dredging in the lakes and rivers of the province, the pits operated by municipalities, and the railway ballast pits, there were about 200 privately owned establishments active in Ontario. These pits vary in size from the small hand-operated farm or wayside pit to the up-to-date mechanically equipped washing plant capable of supplying to the trades all grades of washed sand and gravel or sized material. The largest company, which is a consolidation of several large dredging and gravel pit companies, produces approximately two million tons of sand and gravel per year. The machine operated or mechanically equipped pits total 21 in Ontario.

Two tables follow showing output by source and consumption by grade:—

OUTPUT OF SAND AND GRAVEL DURING 1928 AND 1929

Origin	1928		1929	
	Tons	Value	Tons	Value
		$		$
Private pit operators	2,193,250	973,760	2,080,280	1,138,458
Dredged from Great Lakes and Rivers	1,566,540	580,201	2,323,136	1,290,630
Department of Northern Development	805,073	71,562	1,500,814	111,171
Department of Highways	740,961	164,655	621,000	160,000
Miscellaneous counties and townships	887,293	266,188	1,519,983	455,995
Total	6,193,117	2,056,366	8,045,213	3,156,254

CONSUMPTION OF SAND AND GRAVEL IN 1928 AND 1929

Consumption	1928		1929	
	Tons	Value	Tons	Value
		$		$
Moulding Sand	41,604	44,306	61,238	47,672
Building Sand	1,121,570	417,847	1,455,523	703,442
Other Sands	12,496	12,718	13,646	13,530
*Railway Ballast	....	....	....	....
Concrete and Road Building	4,346,405	1,181,963	5,843,234	1,946,151
†Crushed and washed	671,042	399,532	671,572	445,459
Total	6,193,117	2,056,366	8,045,213	3,156,254

*Sand and gravel produced for ballast by the railways from their own pits has not been included. In 1929 the output from railway ballast pits was 3,313,355 tons worth $306,125.

†This material is used principally in building and construction work.

Licensed Operations.—There were 30 vessels operating in the Province during the season of 1929 engaged in removing sand and gravel under Ontario license. Each boat operating in Crown waters pays to the Province a license fee of $100.00 for each area. The fee to operate on private properties is $10.00. The rate of royalty ranges from 3.6 cents to 20 cents per cubic yard. This is based on the grade of material and the location of the deposits. The license fees amounted to $5,665.00, and total removals were 1,421,533 cubic yards upon which $186,459.65 royalty was collected. These operations were in St. Clair river, St. Lawrence river, Lake Ontario, Thames river, Lake Erie, Midland bay, Lake Huron, St. Marys river and Lake Superior.

A list of sand and gravel producers follows: only pits managed by private operators and having an output of 1,000 cubic yards or over in 1929 are listed:—

PRIVATE SAND AND GRAVEL OPERATORS, 1929

Name or Company	Material G = Gravel S = Sand	Location of Deposits	Address
Adair, Dolson	S. and G.	Caledon tp., lot 24, con. V	Caledon E., R.R. 2.
Allan, James	S. and G.	Tuckersmith tp.	Seaforth.
Armstrong Supply Co., Ltd.	G.	York St., Hamilton	Hamilton.
Ashton, Thos.	S. and G.	Victoria Park Ave.	Toronto, 1354 Queen St. East.
Backus Brooks Co.	S. and G.	McIrvine tp.	Minneapolis, 1100 Builders Exchange.
Bast, Aaron	S. and G.	Waterloo tp.	Kitchener, 112 Lydia St.
Bellyou, N. E.	S. and G.	Murray tp., lot 6, con. 1.	Trenton, R.R. 4.
Benson & Patterson	S. and G.	Stamford	Stamford, 142 St. Paul Ave.
Bray, J. M.	S. and G.	Grey tp., lot 29, con. XV	Brussels, R.R. 2.
Burrows, John	S. and G.	Widdifield tp.	North Bay, 417 Klock Ave.
Cameron, Chas. M.	S. and G.	Mosa tp., lot 3, Range 1	Glencoe, R.R. 1.
Carroll Bros.	S.	Humberstone tp., lots 1, 3, 4, 5.	490 Ellicott Sq., Buffalo, N.Y.
Conlin, Herbert L.	S. and G.	Scarborough tp.	156 Front St. E., Toronto
Crosby, Wm.	S. and G.	Blenheim tp., con. II	Princeton.
Cudmore, Mrs. Alice	S.	Usborne tp., lot 29, con. IV.	Hensall, R.R. 1.
Cudmore, Mrs. Bertha	S. and G.	Howard tp., lot 12	Thamesville, R.R. 6.
Cuthbert, C. E.	G.	West Oxford, lot 4, con. V.	Curries, Ont.

PRIVATE SAND AND GRAVEL OPERATORS, 1929—*Continued*

Name of Company	Material G=Gravel S=Sand	Location of Deposits	Address
Dominion Concrete Co., Ltd.	S. and G.	Oxford tp., Seymour pit	Kemptville, Box 103.
Donald, Andrew	S. and G.	Dereham tp., lot 22, con. VII.	Ingersoll, R.R. 1.
Dowler Bros	S.	Bowesville Road	Billings Bridge.
Durham Stone & Sand Co.	S. and G.	Durham	Toronto, 402 Harbour Commission Bldg.
Ellins Bros	S. and G.	Etobicoke tp	West Toronto, Postal Station "D."
Empire Limestone Co	S.	Humberstone tp	Buffalo, N.Y., 19 Hudson St.
Foster, R. R	S.	Nepean and Gloucester tps.	Ottawa, 278 Echo Drive.
Fraser, S. A	S. and G.	Arnprior, 1 mile E. of	Arnprior, R.R. 1.
Fuller Gravel, Ltd	S. and G.	Fuller, Huntingdon tp	Toronto, 402 Harbour Commission Bldg.
Goodreau, Chas	S. and G.	Chatham tp., lot 24	Thamesville, R.R. 6.
Halliburton, J., & Sons	S.	Guelph tp	Guelph, 101 Strange St.
Halpenny, Lewis E	S.	Arthur tp., lot 28, con. VI	Arthur, R.R. 4.
Higgs, Thos	S. and G.	London tp., lot 21, con. I	London, R.R. 7.
Hill, John D	S. and C.	E. Zorra tp., lot 9, con. XII.	Woodstock, R.R. 6.
Hinde Bros	S.	Mount Dennis	Toronto, 134 Northlands Ave.
Hogg, Robt	S. and G.	Turnberry tp., lot 20, con. VII.	Wingham, R.R. 1.
Howard, N. H	S. and G.	E. Flamborough tp., lot 7, con. I.	Aldershot.
Hydro-Electric Power Commission of Ontario.	S.	Various pits	Toronto, 190 University Avenue.
Jago Concrete Products Co.	S.	Toronto tp	Summerville.
Johnston, G. H	S. and G.	Westminster, lot 21, con. V.	White Oak.
Keyes, Sylvester W	S. and G.	East Oxford tp	Woodstock, R.R. 8.
Kilbourne & Son	S.	Westminster tp., Wharncliffe Rd.	London, 145 Wharncliffe Rd.
Kingston Penitentiary	S. and G.	Portsmouth	Portsmouth.
Kingston Sand & Gravel Co.	S.	Kingston tp., lots 33-34, con. V.	Kingston, 183 William St.
Lawson, James	S. and G.	Morris tp., lot 28, con. VIII.	Blyth, R.R. 2.
Leaside Brick and Sand Co.	S. and G.	Leaside	Leaside.
Le Viness, S	S.	Stamford tp	Niagara Falls, R.R. 3.
Lewis, George	S. and G.		Ailsa Craig.
Lovelace, Edwin J	S.	Pelham tp., lots 6, 7, con. VIII, IX.	St. Catharines, 1 York St.
Lowe, G. G	S.	Cumberland tp., lot 22, con. IV.	Leonard, R.R. 1.
MacArthur, Kenneth	S. and G.	E. Williams tp., lot 23, con. XVII.	Ailsa Craig.
McAndless, W. E	S. and G.	London tp., lot 24, con. XI.	Ilderton.
McColl Bros	S.	Aldborough tp., lot 3, con. VI.	Rodney, R.R. 1.
Maple Sand, Gravel & Brick Co., Ltd.	S. and G.	Vaughan tp	Toronto, 454 King St. W.
Meriam, J. W	S. and G.	Westminster tp., 47 & 48 "A"	London, R.R. 4.
Moore, John	S.	E. Williams tp., lot 8, con. II.	Ailsa Craig, R.R. 1.
Nagle, Jos	S. and G.	Hibbert tp	Dublin.
Newell, Herbert	S. and G.	Malahide tp., lot 35, con. VIII.	Aylmer, R.R. 4.
Ollman Bros	S. and G.	Hamilton	Hamilton, 111 Macklin St.
Park, Mrs. John S	S. and G.	Biddulph tp., lot 30, con. II.	Lucan.
Quick, Chas. R	S. and G.	London, Manor Park	London, 101 Briscoe St.
Quigleys	S.	Saltfleet tp., Bartonville	Hamilton, 317 Main St. E.
Ratcliffe, Ltd., E. B	G.	Barton tp., lot I, con. III.	Bartonville, King St.
Rath, James	S. and G.	N. Dorchester tp., lot 4, con. A. & B.	Putnam, Box 33.
Regan & Blackburn	S.	Mount Dennis	Toronto, 1550 Dufferin St.

PRIVATE SAND AND GRAVEL OPERATORS, 1929—*Continued*

Name or Company	Material G = Gravel S = Sand	Location of Deposits	Address
Robinson, Wm. J.	S. and G.	Stephen tp., lots 4 and 5, con. III.	Crediton, R.R. 1.
Sand & Supplies, Ltd.	S.	N. Dumfries tp.	Toronto, 74 University Ave.
Sargeant Co., Ltd.	S. and G.	Barrie, Penetang St.	Barrie, 51 Dunlop St.
Scheerer, Conrad	S. and G.	N. Easthope, lot 31, con. II.	Stratford, R.R. 1.
Seebach, Ed.	S. and G.	Ellice tp., lot 8, con. IV.	Sebringville, R.R. 1.
Sherman & Hubbell	S. and G.	Camden tp., lot 17, con. "B",	Thamesville, R.R. 5.
Shipley, Lionel J.	S. and G.	London tp.	Wilton Grove, R.R. 2.
Skinner, R.	S.	Usborne tp.	Exeter, Box 81.
Smythe, Ltd., C.	S.	Etobicoke tp.	Toronto, 11 King St. W.
Stevens, J. H.	S.	Saltfleet tp.	Stoney Creek, Box 211.
Stover, Elmer	S. and G.	Middleton tp., lot 16, con. III	Tillsonburg, R.R. 4.
Tack, Henry J.	S.	London tp.	London, P.O., Sub. 1.
Tile, Secord	S. and G.	Lynden	Brantford, 43 Port St.
Vallery, Frank	S. and G.	West Garafraxa tp.	Belwood, Box 107.
Waterford Sand & Gravel Co., Ltd.	S. and G.	Waterford	402 Harbour Bldg., Toronto.
Wellington, County of	S. and G.		Guelph.
White, Homer & Co.	S. and G.	Hallowell tp.	Picton.
Wilks, Geo.	S.	Woodstock	Woodstock, 26 Railway St.
Willox, Hervey	S.	Stamford tp., lots 4, 17	Niagara Falls, 985 Bridge St.
Wilson, M.	S. and G.	Vaughan tp., lot 25, con. III.	Maple, R.R. 1.
Windsor Sand & Gravel Co.	S. and G.	S. Gosfield tp., Essex County.	Walkerville.
Wright & Co.	S.	Tarentorus tp.	960 Green St., Sault Ste. Marie.
York Sand & Gravel Co., Ltd.	S.	E. Toronto	Toronto, 1319 Bloor St. W.
Zavitz, Edgar M.	S. and G.	Lobo tp., lot 6, con. VIII.	Ilderton, R.R. 2.

The following list of sand and gravel operators covers those municipalities which produced material for their own purposes or had it done under contract. Only those with an output of 1,000 yards or over are included. Practically all the producers shown used the sand and gravel for roads.

MUNICIPAL SAND AND GRAVEL OPERATORS, 1929.

Name	Location of Deposit	Address
Albion, Township of	Albion tp.	Albion.
Arlow, D.	King tp.	King, R.R. 2.
Augusta, Township of		Prescott, R.R. 1.
Armstrong, Geo.	Huntley tp.	Carp.
Armstrong, James	Macaulay tp.	Stoneleigh.
Baker, W.	Westminster tp.	Lambeth, R.R. 3.
Baker, Wesley	Delaware tp.	Lambeth, R.R. 3.
Barrie, R.	Chisholm tp.	
Barr, Harry	Renfrew county	Douglas.
Bauer, Otto	Logan tp.	Bornholm, R.R. 1.
Beattie, David	Ellice tp.	Gadshill, R.R. 1.
Bergman, Paul	Waterloo county	Waterloo, R.R. 12.
Beverley, Township of		Rockton.
Black, R.	Westminster tp.	Lambeth, R.R. 3.
Brant, County of	Various locations	Brantford, Court House.
Brown, Fred	Elma tp.	Atwood, R.R. 3.
Bruce, County of	Bruce county	Walkerton, c/o County Engineer.
Bruce, Mrs. John	Oxford N. tp.	Ingersoll, R.R. 3.

MUNICIPAL SAND AND GRAVEL OPERATORS, 1929—*Continued*

Name	Location of Deposit	Address
Birtch, H.	Oxford W. tp.	Woodstock, R.R. 1.
Boobocher, Geo	Woolwich tp.	Elmira, R.R. a.
Campbell, Jos.	Caledon tp.	Caledon.
Canadian National Rys.	Pickering tp.	Toronto.
Caradoc, Township of		Muncey, R.R. 1.
Carleton county	Various locations	Ottawa.
Cassidy, M.	Greenock tp.	Chepstow.
Chaffey, Township of		Huntsville.
Clark, Geo.	Zorra W. tp.	Embro.
Clark, Wm.	Oxford E. tp.	Burford, R.R. 3.
Connell, J.	Goderich tp.	Clinton.
Cooper, A.	Neebing tp.	Fort William.
Crawford, B.	Chisholm tp.	Alderdale, c/o Township Clerk.
Crispin, Mr.	Brant tp.	Hanover.
Currie, F. C.	Oxford county	Woodstock, R.R. 1.
Daniels, N.	Etobicoke tp.	Humber Bay.
Davidson, Thos.	Grey tp.	Brussels.
Delaware, Township of	Various locations	Delaware.
Devitt, C.	Cartwright tp.	Burketon.
Dixon Gravel & Sand Co.	Whitby E. tp.	Oshawa.
Dods, Andrew	Peel county	Alton, c/o G. McClelland.
Doughty, Ed	Eramosa tp.	Guelph, R.R. 1.
Dufferin, County of	Various locations	Orangeville.
Dumfries, S., Township of	Cartwright tp.	Glenmorris.
Dysart, Township of		Haliburton.
Eastnor, Township of		Lions Head.
Elgin, County of	Various locations	St. Thomas, Court House.
Elliott, Wm.	Logan tp.	Mitchell, R.R. 3.
Enniskillen, Township of		Petrolia.
Essex, County of	Sandwich tp.	
Flamboro E., Township of		Waterdown.
Flamboro W., Township of		Dundas, R.R. 2.
Finners, S. D.	Fitzroy tp.	Kinburn, c/o Road Supt.
Fischer, John	Grey tp.	Brussels.
Fitzmaurice, Peter	Monck tp.	Bracebridge, R.R. 1.
Forwell & Sons	Waterloo tp.	Kitchener.
Francis, Jas.	Dorchester N. tp.	Dorchester, c/o Clerk.
Garbutt, W.	Maryborough tp.	Moorefield.
Giddings, Thomas	Hamilton tp.	Baltimore
Gibson, F.	Cartwright tp.	Burketon.
Godfrey, T. J.	Chapleau tp.	Chapleau.
Goodreau, Chas.	Camden tp.	Thamesville.
Gordon, J.	Cartwright tp.	Nestleton.
Gosfield N., Township of		Cottam.
Gosfield S., Township of		Ruthven, R.R. 2.
Greenburn Sand & Gravel Co., Ltd.	Pickering tp.	Greenwood.
Gregory, Lloyd	Nissouri W. tp.	Lakeside, R.R. 1.
Gregory, Lloyd	Oxford county	Medina.
Hallowell, Township of		Picton.
Hanes, Walter	Chaffey tp.	Huntsville.
Hastings, County of	Marmora and Lake tps.	
Havey, James	McNab tp.	Arnprior.
Healy, Jno.	Logan tp.	West Monkton, R.R. 2.
Hodgson, G.	McGillivray tp.	Ailsa Craig, R.R. 2.
Holshuk, E.	Waterloo county	Elmira.
Hope, Township of		Port Hope, R.R. 1.
Huron, County of	Various locations	Goderich.
Hyslop, John	Ancaster tp.	Ancaster.
Irwin, Chas.	Carleton county	Carp.
Johnston, R.	Westminster tp.	Manor Park.
Jones, J. D.	Westminster tp.	Wilton Grove, R.R. 2.
Jones, W.	Blanshard tp.	Granton.
Kent, County of	Chatham	Chatham, Harrison Hall.
Lambton, County of	Various locations	Alvinston.
Larmer, A.	Cartwright tp.	Burketon.

MUNICIPAL SAND AND GRAVEL OPERATORS, 1929—*Continued*

Name	Location of Deposit	Address
Lennox and Addington county	Various locations	Napanee.
Lorenze, Herman	Brant tp	Chesley.
Lobo, Township of		Denfield, R.R. 1.
Love, Bird	Medora tp	Port Sandfield, P.O.
Love, Eric	Elmira tp	Atwood, R.R. 3.
Lisovick, T.	Neebing tp	Cloud Bay.
Loughborough, Township of		Sydenham.
Luper, Jas.	Hullett tp	Londesboro.
Luther E., Township of		Grand Valley, R.R. 3.
Mabee, Fred	King tp	Lloydtown.
McArthur, Arthur	Sydenham tp	Annan, R.R. 1.
McCallum, Dan	Peel county	Caledon East, R.R. 2.
Macdonald & Meredith, Tps. of		Echo Bay.
McGugan, D. A.	Lambton county	Alvinston.
McKee, J	Cartwright tp	Burketon.
McKee, M	Cartwright tp	Burketon.
McKenzie, F	Blanshard tp	St. Marys, R.R. 6.
McKillop, Township of		Seaforth, R.R. 2.
McLaws, M.	Yarmouth tp	St. Thomas, R.R. 4.
McLean, Township of		Muskoka, Baysville.
McLeod, D. J.	Oxford county	Embro.
McMaster, Arch	Minto tp	Palmerston, R.R. 3.
McMurray, J. F	Oxford county	Thamesford.
McNab, John	Peel tp	Arthur, R.R. 4.
McPhail, R.	Sombra tp	Sombra.
McPhee, D. A.	Hawkesbury W. tp	Vankleek Hill.
McQuade, O.	Cartwright tp	Burketon.
McQuade, S	Cartwright tp	Nestleton.
Malahide, Township of		Aylmer, R.R. 3, Road Supt
Marshall, John	March tp	Carp.
Malloy, Andrew	Blanshard tp	St. Marys.
Martin, Enos	Woolwich tp	St. Jacobs.
Medora, Township of		Torrance.
Middlesex, County of	Various locations	London, County Buildings.
Middleton, Township of		Tillsonburg, R.R. 4.
Morrison, Township of		Severn Bridge.
Morris, John	Zorra W. tp	Embro.
Morton, A.	McGillivray tp	Ailsa Craig, R.R. 2.
Mott. B.	Oxford county	Norwich.
Murphy, Walter	Whitby E. tp	Oshawa
Nagel, George	Minto tp	Harriston, R.R. 4.
Nairn, Township of		Nairn Centre.
Neeb, Alex	Stephen tp	Dashwood.
Nepigon, Township of		Nipigon.
Nichol, Wm	Elma tp	Atwood, R.R. 3.
Nissouri W., Township of		Belton, R.R. 1.
Norwich N., Township of	Oxford county	Burgessville, Clerk, C. E. Burgess.
Norton, Wm.	Brant tp	Walkerton.
Northumberland and Durham, Counties of	Various locations	Cobourg.
Orford, Township of		Muirkirk, R.R. 1.
Ottawa Suburban Roads	Various locations	Ottawa.
Owen Sound Suburban Roads	Various locations	Owen Sound.
Owens, J. B	Chisholm tp	Alderdale, c/o Township Clerk.
Oxford, County of	Various locations	Woodstock, Court House.
Page Concrete Products	Etobicoke tp.	New Toronto.
Parr, John	Peel county	Brampton.
Paul, Wm	Dysart tp	c/o Clerk, Haliburton.
Peglo, Fred	Brant tp	Cargill.
Pelham, Township of		Fenwick.
Pickering, Ham	Scott tp	Uxbridge, c/o Road Supt.
Pickering, Township of		Claremont.
Pollock, Geo	Carleton county	Bowesville.
Prince Edward, County of		Picton, Road Supt.

MUNICIPAL SAND AND GRAVEL OPERATORS, 1929—*Continued*

Name	Location of Deposit	Address
Rae, Alec	Elma tp	Listowel, R.R. 2.
Raleigh, Township of		Charing Cross.
Rathwell, Marshall	Carleton county	Navan.
Read, J. J.	Fitzroy tp	Kinburn, c/o Road Supt.
Reid, Wm. J.	Stanley tp	Varna.
Rintoul, James	Dufferin county	Laurel.
Robertson, D.	Plantagenet S. tp	Maxville.
Rollins, John	Stephen tp	Crediton.
Rowntree, Geo.	Vaughan tp	Woodbridge.
Rutherford, T. J	Sydenham tp	Owen Sound.
Rydall, Alex.	Eastnor tp	Lions Head.
Ryde, Township of		Housey's Rapids.
Saltfleet, Township of		Stoney Creek.
Sarnia, Township of		Mandaumin.
Scheerer, Conrad	Easthope S. tp	Stratford.
Schweitzer, Austin	Waterloo county	Roseville.
Schwindt, Edmund	Woolwich tp	Elmira, R.R. 1.
Sherman & Hubbell	Camden tp	Thamesville.
Shore, John	Westminster tp	Wilton Grove, R.R. 2.
Shugg, Wm.	Lambton county	Alvinston.
Shuniah, Municipality of		Port Arthur.
Simmonds, A.	Maryborough tp	Moorefield.
Smith, Alfred	Dufferin county	Orangeville, R.R. 2
Smith, Jas. D.	Renfrew county	Eganville, R.R. 1.
Smith, J. O.	Ryerson tp	Burks Falls.
Smith, Wm.	Dufferin county	Shelburne, R.R. 1.
Snyder	Wilmot tp	New Hamburg.
Soden, John	Pickering tp	Brougham.
Southwold, Township of	Fingal	Fingal.
Stalkhe Bros	Ellice tp	Mitchell, R.R. 3.
Stephenson, Ed	Stanley tp	Varna.
Stisted, Township of		Etwell P.O.
Sydenham, Township of		Owen Sound, R.R. 6.
Tait, W. F.	McKellar tp	McKellar, c/o Clerk.
Tate, Drummond	Dufferin county	Grand Valley.
Taylor, Ed	Dufferin county	Waldemar, R.R. 2.
Taylor, Thos	Carleton county	Osgoode station.
Thibeault, Albert	Rayside tp	Agilda, c/o Clerk.
Thompson, Eli	McGillivray tp	Parkhill, R.R. 8.
Thompson, Gilbert	Otonabee tp	Peterborough.
Toronto Gore, Township of		Malton, R.R. 3.
Townsend, Township of		Waterford, c/o Wm. Myerscough.
Turner, John	Stanley tp	Clinton.
Tyendinaga, Township of		Corbyville.
Valliant, James	Renfrew county	Westmeath.
Vodden, Thos.	Grey tp	Ethel.
Wallace, Roy	North Gower tp	Kars P.O.
Walsingham N., Twp. of S. and G.		Clerk and Treasurer, Langton.
Waltam, Wm	Dufferin county	Hornings Mills.
Warwick, Township of		Watford.
Waterloo, County of	Various locations	Kitchener, Court House.
Waters, W	Waterloo county	Galt.
Westicott, Wm.	Dufferin county	Melancthon, R.R. 1.
Whitby E., Township of		Oshawa, 73 John St.
Widdifield, Township of		North Bay, Ont.
Williamsburgh, Township of		Williamsburgh.
Wilson, F	Carleton county	Kars.
Young, John	Zorra W. tp	Embro.
Zimmerman, R.	Macaulay tp	Bracebridge.

Stone

The production of stone, including limestone, sandstone, trap and granite, during 1929 was 5,244,194 tons as against 4,597,764 tons during the previous year. The number of employees was 1,911 during the period, while wages paid amounted to $1,577,247.

The following table shows the valuation of the several kinds of stone used or marketed during the past five years:—

VALUE OF STONE PRODUCTION, 1925–1929

Year	Limestone	Sandstone	Trap	Granite	Total
	$	$	$	$	$
1925	2,530,623	44,562	154,107	88,043	2,817,335
1926	2,908,520	41,892	212,613	95,143	3,258,168
1927	3,716,419	50,192	205,480	88,618	4,060,709
1928	3,440,858	53,903	456,351	73,877	4,024,989
1929	3,759,357	69,898	367,590	574,771	4,771,616

Quantities and values by grades and also for the various uses of stone during 1929 are shown in the following table. It might be pointed out that the limestone consumed in lime burning is not included here, since this is covered in the section on lime:—

STONE STATISTICS BY GRADES* AND USES, 1929

Uses	Limestone		Granite		Trap		Sandstone		Total	
	Tons	Value	Tons	Value	Tons	Value	Tons	Value	Tons	Value
Building and Ornamental	2,0664	$ 154,816	3,397	$ 21,676		$	10,697	$ 69,898	34,758	$ 246,390
Flag, curb, and paving blocks	15	150	7,581	65,863					7,596	66,013
Flux	318,910	243,867							318,910	243,867
Chemicals	155,068	137,947							155,068	137,947
Agriculture and fillers	15,999	59,305							15,999	59,305
Rubble and Rip Rap	146,837	123,404							146,837	123,404
Railways	1,574,590	1,142,648	485,199	474,417	146,318	153,634			2,206,107	1,770,699
Highways	2,148,623	1,897,220	73,801	12,815	136,495	213,956			2,358,919	2,123,991
Total	4,380,706	3,759,357	569,978	574,771	282,813	367,590	10,697	69,898	5,244,194	4,771,616
Number of producers		55		15		5		†7		82
Number of wage-earners		1,431		275		145		60		1,911
Wages paid		$1,159,279		$280,756		$96,038		$41,174		$1,577,247

*Separate statistics covering the special grades of stone, *e.g.*, poultry grit, calcite and spar for stucco dash, and broken stone for artificial stone products have not been compiled. The figures are included in limestone and granite. In 1928 this group produced 6,617 tons valued at $46,736, and the output did not vary greatly in 1929.

†Only 4 operators reported.

Stone producers in 1929 (limestone, sandstone, trap, granite, and miscellaneous) follow:—

LIMESTONE, 1929

Name of Company	Location of Quarry	Address
Barton, Municipality of	Barton tp	Hamilton, Court House.
**Beachville White Lime Co., Ltd.	Beachville	Beachville.
Billy, Chas. V	Meath	Montreal, 510 Oxford Ave.
Bourgie, J. B	Russell tp	Embrun.
Brule & Sons, E. D	Hogsback, Gloucester tp	Billings Bridge.
Brunner, Mond Canada, Ltd	Anderdon tp	Toronto, 501 Dominion Bank Bldg.
Canada Cement Co , Ltd	Thurlow tp	Montreal, Station B, Box 290.
*Canada Crushed Stone Corp'n. Ltd	W. Flamborough tp	Hamilton, 72 Sun Life Bldg.
Carleton, County of	Gloucester tp	Ottawa, Court House.
Cartmell, John	Thorold	Thorold.
Cloutier & Grenon	Limoges	Casselman.
Cook, J. S.	Amabel tp	Wiarton.
Coldwater Crushed Stone, Ltd	Medonte tp	Coldwater.
Code, W. H		Smith's Falls.
Dagg, J. G	Meaford	Kleinburg.
Doan Contracting Co., Ltd	N. of Brechin	Toronto, 384 Sorauren Ave.
Dufferin Construction Co., Ltd	Various localities	Fleet St. at Bathurst, Toronto.
Edgar Irvine Co., Ltd	Near Pembroke	Alexandria.
Foster, R. R	Merivale Rd	Ottawa, 278 Echo Drive.
Gordon Crushed Stone Co., Ltd	Haldimand county	Toronto, 239 Confederation Life Bldg.
Grenville Crushed Rock Co., Ltd	Oxford tp	Oxford Mills.
*Hagersville Contracting Co., Ltd	Walpole tp	Hamilton, 76 Sun Life Bldg.
†Hagersville Quarries, Ltd	Walpole tp	Hagersville.
Harvey, W. H., and Son		Deseronto.
Henniger, M. G	Goulbourn tp	Smiths Falls.
Highways Department, Ontario	Various townships	Toronto, Parliament Bldgs.
†Innerkip Quarries, Ltd	Innerkip	Innerkip.
Kingdon Mining, Smelting & Mfg. Co.	Galetta	Montreal, 314 Beaver Hall Hill.
Kingston Penitentiary	Portsmouth	Portsmouth.
†Kirkfield Crushed Stone, Ltd	Kirkfield	Toronto, Fleet St.
Langton, Thos	Medonte tp., lots 19, 20, con. XIII.	Coldwater.
Longford Crushed Stone, Ltd	Rama tp	Orillia, 6 Peter St.
Law Construction Company, Ltd	Sydenham tp	Toronto, 225 Sterling Rd.
Limestone Products, Ltd	Simcoe tp	Toronto, 305 Excelsior Life Bldg.
‡McKay Co., Ltd., Alex	Owen Sound	Toronto, 2 Browns Ave.
McGinnis & O'Connor	Pittsburgh tp	Kingston.
McQuigge, J. R	Ramsay tp., con. IX	Arnprior.
Noranda Mines, Ltd	Farr quarry, Haileybury	Toronto, 804 Royal Bank Bldg.
Ontario Stone Corporation, Ltd	North Orillia tp	Toronto, 611 Excelsior Life Bldg.
Ontario Reformatory	Guelph	Guelph.
Owen Sound, Municipality of	Owen Sound	Owen Sound.
Orser, S. H		Sydenham.
Pembroke, Municipality of	Markus quarry	Pembroke.
Pirson, John	Grantham tp	Stevensville.
*Puslinch Quarry, Ltd	Puslinch tp	Hamilton, 76 Sun Life Bldg.
Quinton, W. L	Kitley and Wolford tps	Jasper.
*Queenston Quarries, Ltd	Niagara tp	Hamilton, 76 Sun Life Bldg.
**Robertson & Co., Ltd., D	Nassagaweya tp	Toronto, 26 Queen E.
Robillard & Son, H	Gloucester tp	Ottawa, 195 Nicholas St.
Roddy, J. M	Kingston	Kingston, 293 Division St.

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*Canada Crushed Stone Corp'n., Ltd., comprises in addition the following companies: Hagersville Contracting Co., Ltd., Queenston Quarries, Ltd., Wentworth Quarries, Ltd., and Puslinch Quarry, Ltd.

†Owned by Dufferin Construction Co., Ltd.

‡Operated by M. C. Lapierre, 1994 Ninth St. E., Owen Sound.

**Purchased by Canada Gypsum and Alabastine, Ltd.

LIMESTONE, 1929—*Continued*

Name of Company	Location of Quarry	Address
Routly, H. T.	Callander Rd., Georgetown, and Kincardine.	Toronto, 9 Richmond St. E.
*Standard White Lime Co., Ltd.	Beachville	Guelph, 15 Douglas St.
Wallace & Sons, R.	Kingston tp.	Kingston, 142 Patrick St.
Walker Bros.	Stamford tp.	Thorold, Box 586.
Wehman, John	Kingston tp.	Kingston, 251 Division St.
Welland Ship Canal	Lincoln and Welland cos.	St. Catharines.
Wilford & Co., Ltd., F. R.	Matilda and Kitley tps.	Lindsay, 24 William St. W.
Windmill Point Crushed Stone Co., Limited.	Bertie tp.	Toronto, 225 Sterling Rd.
†Wentworth Quarries, Ltd.	Saltfleet tp.	Hamilton, 76 Sun Life Bldg.

*Purchased by Canada Gypsum and Alabastine, Ltd.

†Canada Crushed Stone Corp'n., Ltd., comprises in addition the following companies: Hagersville Contracting Co., Ltd., Queenston Quarries, Ltd., Wentworth Quarries, Ltd., and Puslinch Quarry, Ltd.

SANDSTONE

Name of Company	Location of Quarry	Address
Credit Valley Quarries, Ltd.	Halton and Peel counties.	Florence St., Toronto 3.
Danforth Stone Co., Ltd.	Limehouse	Toronto, 736 Danforth Ave.
Logan, Hugh	Esquesing tp.	Glen Williams.
Norrie & McHardy	Credit Valley	Limehouse.
Norton, A. W.	Credit Valley	Limehouse.
Smeaton, R. C.	Inglewood	Inglewood.
Thompson, F.	Esquesing tp.	Terra Cotta.

TRAP

Name of Company	Location of Quarry	Address
Dominion Trap Rock Co., Ltd.	Bruce Mines	Montreal, 921 New Birks Bldg.
Fort William, City of	Rifle Range	Fort William.
Hydro-Electric Power Com'n.	Hydro	Toronto, 190 University Ave.
Ontario Rock Company, Ltd.	Belmont and Methuen tps.	Toronto, Crown Office Bldg.
Quinn Stone and Ore Co., Ltd.	Mission Indian Reserve.	Fort William.

GRANITE

Name of Company	Location of Quarry	Address
Crystallite Stone Products, Ltd.	Birds Creek	Hamilton, 59 Hillyard St.
Gordon, D. J., Granite Co.	Gananoque	Toronto, 239 Confederation Lfe Bldg.
Grenville Crushed Rock Co., Ltd.	Hawk Lake, 25 miles E. of Kenora.	Montreal, 917 Keefer Bldg.
Hokanson, Swan	Leeds tp., lot 7, con. II.	Leeds.
Horne, Wm.	Butler	Winnipeg, Man., Suite M., Ashford Blk.
Hall, R. Reece		Parry Sound, P.O. 115.
McKee, James	Escott tp.	Lansdowne, R.R. No. 3.
Peninsula Granite Quarries, Ltd.	Peninsula	Peninsula.
Robertson & Muchmore	Leeds tp.	Gananoque.
Keniston & Lowans	Miscellaneous producers.	Gananoque.
Beresford, John		
Brown, Jos.		
Hutcheon; Cook; Mills		

MISCELLANEOUS

Name of Company	Location of Quarry	Address
Dominion Stucco Co.*	Silver Mountain	St. Boniface, Man., 264 Berry St.
Bollender Bros.	Haliburton	Haliburton.
Cooper, A.	Neebing tp.	Fort William.
Kingdon Mining, Smelting and Mfg. Co., Ltd.	Galetta	Montreal, 314 Beaver Hall Hill.
Winnipeg Roofing Co., Ltd.		

*Formerly Winnipeg Roofing Co.

Clay Products

During 1929 a new survey of Ontario's ceramic industry was completed by Prof. R. J. Montgomery, Ceramic Engineer, University of Toronto. The Ontario Department of Mines is meeting the cost of this work, the results of which will be embodied in the form of a comprehensive report issued by the Department (Volume XXXIX, Part 4, 1930).

The production of heavy clay products of all classes, including sewer pipe, showed a gain of $652,498 in 1929. With the exception of the year 1922, when prices were abnormal, the production for 1929 was the greatest on record. The statistics reflect the activity in building and construction throughout the Province in general (already mentioned in the introductory remarks under "Structural Materials and Clay Products"), and more particularly in the large cities where the building industry has consumed large quantities of brick.

The following table shows in detail the quantities and values of the several kinds of clay products made and sold in Ontario:—

HEAVY CLAY PRODUCTS MARKETED, 1929

Kind	Number or Quantity	Value $
Brick—Soft-mud process—Face	25,379,063	522,191
Brick—Soft-mud process—Common	38,054,484	606,714
Stiff-mud (wire cut) process—Face	63,596,522	1,333,723
Stiff-mud (wire cut) process—Common	31,523,914	505,958
Dry-press—Face	30,290,835	611,625
Dry-press—Common	5,481,805	76,016
Fancy or ornamental brick (including special shapes, embossed and enamelled brick)	111,337	9,012
Sewer	4,631,020	92,316
Tile, structural: Hollow blocks (including fireproofing and load-bearing tile) . . . tons.	103,454	972,993
Roofing tile . . . no.	35,075	4,628
Floor tile (quarries) . . . sq. feet	307,400	70,186
Tile, drain . . . no.	22,535,098	629,322
Sewer pipe (including copings, flue linings, etc.)		1,167,463
Pottery (flower pots) from domestic clay		96,394
Haydite		131,621
Total value		6,830,162

Production of "Haydite," a patented building material, began in Ontario in the spring of 1929. The process involves the burning of shale or clay to clinker in an inclined metal cylinder resembling a rotary cement kiln. At 2000° F. incipient fusion takes place, and gases formed cause expansion of the clay or shale into a light weight, thoroughly vitrified, cellular product. After cooling, the clinker is crushed and screened to various sizes. The product may be used as aggregate for any type of monolithic concrete construction, or it may be moulded or cast into blocks mixed with cement mortar as a binder. The resultant product is much lighter than hollow concrete blocks, and possesses many other advantages in interior construction, such as being soundproof and fireproof. If used for outside walls in house construction, a stucco finish may be applied directly.

During the period a gain was again noted in the output of common brick. Pressed brick, along with fancy and ornamental shapes and building tile showed a slight gain as compared with 1928. Pottery was down slightly in value while sewer pipe showed an increase.

The value of clay products marketed for the last pre-war year (1913), for 1922, and for the past five years is given below:—

VALUE OF CLAY PRODUCTS SOLD OR USED, 1913, 1922, AND 1925–29

Year	Brick		Pottery	Drain Tile	Sewer Pipe	Haydite	Total
	Common	Pressed, Fancy, Building Tile, etc.					
	$	$	$	$	$	$	$
1913	3,283,894	1,162,860	52,875	292,767	600,297	....	5,392,693
1922	2,614,120	2,899,205	88,889	368,180	973,824	....	6,944,218
1925	733,693	3,074,780	86,000	360,710	893,443	....	5,148,626
1926	768,734	3,324,526	87,600	340,403	835,206	....	5,356,469
1927	1,063,724	3,323,867	91,300	521,957	852,187	....	5,853,035
1928	1,154,763	3,377,648	*98,519	572,577	974,157	....	6,177,664
1929	1,281,004	3,524,358	96,394	629,322	1,167,463	131,621	6,830,162

*Includes $400 worth of other products.

Following is a list of companies and individuals operating in 1929:—

BRICK AND TILE PLANTS, 1929

Name or Company	Address	Product
*Alvinston Brick & Tile Co., Ltd.	Alvinston. Box 26	Brick and tile.
Baird & Son, H. C.	Parkhill	Brick.
Barnhardt, W. H.	Stratford	Brick and tile.
Bartonville Pressed Brick Co., Ltd	Hamilton, 620 Lister Block	Brick.
Batchelor, Samuel	Proton Station	Brick and tile.
Bay of Quinte Brick Works (D. W. Rollins).	Belleville	Brick.
Booth Brick & Lumber Company	New Toronto	Brick.
Brampton Pressed Brick Co., Ltd	Brampton	Brick and tile.
Broadwell & Son, B	Kingsville, Box 137	Brick and tile.
Butwell, Richard	Toronto, 107 Lake Shore Rd., Humber Bay.	Brick.
Caledon Shale Brick Co., Ltd.	Toronto, 600 Bay St	Brick.
Campbell, Neil F.	West Lorne, R.R. No. 1	Brick and tile.
Canadian Fireclay Products, Ltd.	Toronto, 60½ Adelaide St. East	Tile.
Canadian Pressed Brick Co., Ltd.	Hamilton, 63 Ottawa St. S.	Brick.
Casemore & Sons, R.	Shallow Lake	Brick and tile.
Chapman, John (Napanee Brick and Tile Works.)	Napanee, R.R No. 3	Brick and tile.
Chapman Brick Co., Ltd.	Toronto, 104 Dawes Rd.	Brick.
Cooksville Company, Ltd	Toronto, 26 Queen St. E.	Brick, blocks and Haydite.
Cooper, W. H	Hamilton, 312 Clyde Block	Brick.
Cornhill Sons, Ltd., James	Chatham, Grand Ave	Brick.
Cowell Bros	Tillsonburg	Brick and tile.
Curtin, Frank	Lindsay, R.R. No. 4	Brick.

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*Leased to J. C. Waide, which see.

Name or Company	Address	Product
Curtis Bros	Peterborough, Box 809	Brick and tile.
Dalton, M	Dresden	Tile.
DeLaplante & Co., J. E	Dawes Road, Coleman P.O.	Brick.
Dellar & Son, Albert	Brownsville	Tile.
Deller Bros	Norwich, R.R. No. 2	Brick, blocks and tile.
Deller, Wm. H	Thorndale, R.R. No. 4	Tile.
*Denison Tile Co., Ltd	Windsor	Brick and tile.
Dochart Brick, Tile & Terra Cotta Works, The.	Arnprior	Brick and tile.
Dolan, John	Watford, R.R. No. 2	Tile.
Dominion Sewer Pipe & Clay Products Industries, Ltd.	Swansea, Toronto 3	Brick and tile.
Donaldson and Son, S. E	Harriston, R.R. No. 4	Tile.
Donaldson, T. G., (Moscow Brick and Tile Works.)	Greenock, R.R. No. 1	Brick and tile.
† Don Valley Brick Works, Ltd., The	Toronto, 114 Federal Bldg	Brick and blocks.
Douglas & Douglas	Wilkesport	Tile.
Dunn, David	New Liskeard	Brick.
Elliott, Chas	Bluevale	Brick and tile.
Elliott, Jas., Jr	Sault Ste. Marie	Brick.
Elliott, Wm	Glenannan	Brick and tile.
Frid Bros	Hamilton, Dundas Rd. and Macklin St.	Brick.
Gammage, C. R	Dresden	Tile.
Gardiner, Wm	Blenheim	Brick and tile.
Godfrey & Co., Thos	Carleton Place	Brick.
Grimsby Brick & Tile Co	Grimsby	Brick and tile.
Haist, Wellington	Crediton	Tile.
Hallatt & Son, H	Comber	Brick and tile.
Hallatt Clay Products, Ltd	Chatham, 4 Richards Block	Tile.
Halton Brick Co., Ltd	Toronto, 28 Symes Rd	Brick.
Hamilton Pressed Brick Co., Ltd	Hamilton, Kensington Ave. S	Brick.
Hill, Aaron	Essex	Brick and tile.
Hill, A. W	Coatsworth, R.R. No. 1	Tile.
Hircock Bros	Bowmanville	Brick.
Hitch, D. A	Ridgetown, Box 236	Brick and tile.
Hitch, Thos	St. Thomas, Box 254	Brick, blocks and tile.
Hodder, Mrs. Jos. H., & Sons	Dutton	Tile.
Houston Co., Ltd., The	Tweed	Brick.
Howlett & Sons, Fred	Petrolia, Box 3	Brick, blocks and tile.
Huntsville Brick & Tile Works	Huntsville, Box 308	Brick and tile.
Hillman, Wm. (Staples Brick & Tile Co.)	Staples	Brick.
Interprovincial Brick Co., Ltd	Toronto, 30 Toronto St	Brick and tile.
Jackson, W. B	Brantford, 290 Rawdon St	Brick and tile.
Jamieson Lime Co	Renfrew	Brick and tile.
Janes, D. A	Mt. Brydges	Brick and tile.
Jasperson, B	Kingsville	Brick and tile.
Jervis, W. J	Dorchester, R.R. No. 3	Brick.
Johnson, James, Sr	Pembroke, R. R. No. 3	Brick and tile.
Koebel Bros	St. Clements, Box 54	Tile.
Kruse Bros	Seaforth, R.R. No. 3	Brick and tile.
Kerr, Fred	Crediton	Tile.
Lindsay, Earl	Wallaceburg, R.R. No. 2	Tile.
Martin, Thos. E	Thamesville, R.R. No. 4	Tile.
Maw, Wm. T	Minesing	Brick and tile.
McCoomb, Chester	Denfield, R.R. No. 2	Brick and tile.
McCormick Bros	Watford, R.R. No. 5	Tile.
McEachran, M., & Sons	Highgate	Brick and tile.
McFarlane, W. J	Forest	Tile.
‡McFarren, Ltd., F. B	Toronto, 18 Toronto St	Brick.
McIvor Bros	Cobourg, Box 636	Brick.
McMahon, Robert	Kerwood, R.R. No. 2	Tile.
Middleton, Chas	Wyoming	Tile.

*Plants at Tilbury, Fletcher, and Belle River, sold to Fred Howlett and Sons.

†Sold to Toronto Brick Co.

‡Formerly Streetsville Brick Co., Ltd.

Name or Company	Address	Product
Milton Pressed Brick, Ltd.	Milton	Brick.
Miner, M. F.	Kingsville	Brick and tile.
Morley Walker Brick Co.	Toronto, 114 Greenwood Ave.	Brick.
Moulton, John	Holyrood, R.R. No. 2	Brick and tile.
Napanee Brick and Tile Works	*See* Chapman, John	
National Fire Proofing Co. of Canada, Ltd.	Toronto, 601 Dominion Bank Bldg.	Blocks and tile.
National Sewer Pipe Co., Ltd.	Aldershot	Brick and structural tile.
Ollman Bros.	Hamilton, 111 Macklin St.	Brick.
Ontario Government (Dept. of Provincial Secretary).	Toronto (Mimico plant)	Brick, blocks and tile.
O'Reilly, T. E.	Ottawa, 320 Bay St.	Brick.
Ottawa Brick Mfg. Co., Ltd., The	Ottawa, 53 Queen St.	Brick and tile.
Ott Brick & Tile Mfg. Co., The	Kitchener, 33 King St. E.	Brick and tile.
Owen Sound Brick Co., Ltd., The	Owen Sound	Brick.
Parks, H. W.	Dresden, R.R. No. 2.	Tile.
Paxton, Fred R.	St. Catharines, 242 Queenston St.	Brick.
Pembroke Brick Co., The	Pembroke	Brick.
Phinn, Geo. E. (Strathroy Plant)	London, 238 Briscoe St.	Tile.
Phinn Brick Co.	London, Pipeline Rd.	Brick and tile.
Phippen & Son, H. W.	Toronto, 150 Dawes Rd.	Brick.
Piggot & Co., Geo.	Toronto, 72 Guestville Ave.	Brick.
*Piper, Murphy and Piper	Fort William, 509 Victoria Ave.	Brick.
Port Rowan Brick & Tile Co.	Port Rowan	Brick, blocks and tile.
Price & Cumming	Toronto, 58 Wellington St. E.	Brick.
Price & Smith	Toronto, 458 Greenwood Ave.	Brick.
Richardson & Son, J.	Kerwood	Brick and tile.
Rollins, D. W.	*See* Bay of Quinte Brick Works	
Russell Brick Company	Toronto, 40 Blake St.	Brick.
†Sadler, Frederick L.	Dublin	Brick and tile.
Sherman Clay Products	Kingsville	Brick and tile.
Smith, Alex., & Son	Dutton, R.R. No. 2.	Brick and tile.
Snelgrove, Andrew	Beaverton	Brick and tile.
Sproat, William M.	Seaforth, R.R. No. 4	Tile.
Standard Brick Company, Ltd.	Toronto, 500 Greenwood Ave.	Brick.
Staples Brick and Tile Co.	Staples	Tile.
Steele, Edwin	Vankleek Hill	Brick.
Stroh, M. C.	Conestogo	Brick and tile.
Sun Brick Co., Ltd.	Toronto, 1104 Bay St.	Tile and blocks.
Superior Brick & Tile Co., Ltd.	Fort William	Brick and tile.
Sutherland, W. A.	Parkhill, Box 293	Brick and tile.
Tope, Richard, Estate of	Hamilton, 171 Queen St. S.	Brick.
Toronto Brick Company, Ltd.	Toronto, 60 Victoria St.	Brick.
Thompson, Ralph	Henfryn	Brick.
Telford, J. C.	Southwold Station	Tile.
Tweed Brick & Tile Works	Tweed	Brick and tile.
Voakes & Son, D.	Ruscom, Box 20	Tile.
Wagstaff, Albert H.	Toronto, 348 Greenwood Ave.	Brick.
Wagstaff, Charles	Lindsay, R.R. No. 4	Brick and tile.
Waide, J. C.	London, 1010 Adelaide St.	Brick and tile.
Waite, John E.	Forester Falls	Tile.
Wallace & Son, R.	North Bay, 66 First Ave. E.	Brick.
Watson, W. S.	Thedford	Brick.
Weetzel, J. C.	Tavistock	Tile.
Wein, Aaron	Crediton	Brick and tile.
Winch, Stuart A.	Paisley	Tile.
Windsor Brick & Tile Co.	Windsor, Exchange Bldg.	Brick, blocks and tile.
Wright & Sons, Geo.	Comber, Box 46	Tile.
Woodslee Brick & Tile Co.	Woodslee	Brick and tile.

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*Same as Fort William Brick Co.

†Same as Dublin Brick and Tile Works.

SEWER PIPE AND POTTERY WORKS, 1929

Name of Company	Location of Plant and P.O. Address of Manager, etc.
SEWER PIPE	
*Dominion Sewer Pipe and Clay Industries, Ltd.	Swansea and Aldershot.
*Hamilton & Toronto Sewer Pipe Co., Ltd.	Hamilton.
*Ontario Sewer Pipe & Clay Products, Ltd.	Mimico.
POTTERY	
Canada Potteries, Ltd.‡	Hamilton, Locke St.
Davis & Son, John	Toronto, 601 Merton St.
Foster Pottery Company	Hamilton, Main St. West.
†Smith Potteries, The	Oshawa, Box 111.

*These companies were absorbed early in 1929 by the National Sewer Pipe Company, Limited, with executive offices in the Metropolitan Building, Toronto.

†Imported clay used for making glazed ware and art pottery.

‡Formerly R. Campbell Sons.

Mining Company Incorporations

A summary of mining companies incorporated and licensed in Ontario for the last pre-war year and subsequently is given hereunder:

ONTARIO MINING COMPANIES INCORPORATED AND LICENSED, 1913–1929

Year	Incorporated			Extra-Provincial Companies Licensed	
	No.	Nominal Capital	"No Par" Shares	No.	Capital for use in Ontario
		$			$
1913	119	78,000,000	....	12	21,735,000
1914	80	39,030,000	....	13	5,445,000
1915	59	42,005,000	....	2	10,200,000
1916	83	109.079,500	....	8	7,011,650
1917	100	117,183,000	....	7	7,202,000
1918	59	49,800,000	....	7	15,000,000
1919	149	223,600,000	....	10	9,554,197
1920	119	146,094,000	....	12	9,435,000
1921	67	105,715,000	....	6	1,030,500
1922	91	181,040,000	....	6	830,000
1923	88	179,295,500	....	6	1.775,000
1924	85	156,485,000	....	2	200,000
1925	70	107,400,000	9,010,000	3	162,510
1926	145	165,655,750	22,386,500	6	4,850,000
1927	199	344,145,000	40,034,000	10	3,260,000
1928	211	495,575,000	30,778,400	17	7,208,500
1929	97	142,390,000	32,557,200	13	1,540,000

Of the 97 companies incorporated in 1929, 71 had specified capital and 26 were companies without nominal or par value, while 5 companies had shares of both kinds. The corresponding figures for 1928 were 211, 183, 33 and 5.

MINING COMPANIES WITH SPECIFIED CAPITAL INCORPORATED IN ONTARIO IN 1929

Name of Company	Head Office	Date of Incorporation	Capital
			$
Acme Gas & Oil Co., Ltd	Toronto	July 12	1,000,000
Animikie Iron Ore Co., Ltd	Fort William	April 17	500,000
Barrie-Frontenac Mines, Ltd	Toronto	Nov. 28	500,000
Big Turtle River Mining Co., Ltd	Fort Frances	Sept. 9	500,000
*Bracton, Limited	Toronto	Jan. 14	1,000,000
Brookbank Mines, Ltd	Toronto	Mar. 25	3,000,000
Canadian Aerial Exploration, Ltd	Haileybury	Feb. 26	200,000
Canadian Diatomite and Silica, Ltd	Toronto	Mar. 20	600,000
Canadian Mineral Lands Development Co., Ltd	Toronto	Sept. 20	4,000,000
Central Gold Mines, Ltd	Picton	May 1	3,000,000
Cheney Mines, Ltd	Toronto	Dec. 26	2,000,000
Cibuck Copper Mines, Ltd	Chapleau	Mar. 14	1,500,000
*Clay Industries, Limited	Aldershot	Nov. 9	2,000,000
Condor Consolidated Mines, Ltd	Toronto	Aug. 9	5,000,000
Conroyal Gold Mines, Ltd	Toronto	Feb. 25	5,000,000
Copper-Chief Mines, Ltd	Toronto	Aug. 9	3,000,000
Crater Copper Mines, Ltd	Toronto	Mar. 16	1,000,000
Crow River Mines, Ltd	Toronto	Jan. 25	4,000,000
Dominion Stone Co., Ltd	St. Catharines	Jan. 9	100,000
Farmlime Company, Ltd	Sarnia	Mar. 5	250,000
Four Nations Gold Mines, Ltd	Kirkland Lake	April 23	3,000,000
Horse Shoe Mines, Ltd	Toronto	Feb. 5	4,500,000
Hutchinson, Ltd., A. G.	Sandwich	Feb. 11	40,000
Interlake Quarries, Ltd	Toronto	July 25	1,000,000
International Copper Co., Ltd	Toronto	Nov. 9	250,000
Iris Gold Mines, Ltd	Kirkland Lake	Mar. 7	2,000,000
Kaladar Gold Mines, Ltd	Toronto	Feb. 26	4,000,000
Kashouillette Syndicate, Ltd	Toronto	Feb. 6	40,000
Kingston Ontario Mines, Ltd	Toronto	Aug. 1	40,000
Kirkland Mile Strip Mining Co., Ltd	Toronto	July 9	3,000,000
Kishkap Mines, Ltd	Haileybury	Mar. 20	3,000,000
Kukuku Mines, Ltd	Haileybury	Mar. 20	3,000,000
Laird Mining & Exploration Co., Ltd	Sault Ste. Marie	Feb. 1	500,000
Lakeland Gold Mines, Ltd	Hamilton	Sept. 4	4,000,000
Limestone Products, Ltd	Toronto	June 7	250,000
MacKay, Ltd., D.	Toronto	Feb. 8	40,000
Mallard Lake Gold Mines, Ltd	Toronto	Mar. 15	3,000,000
Malone Lake Mining Co., Ltd	Toronto	July 8	3,000,000
Maple Leaf Mines, Ltd	Toronto	Mar. 25	3,000,000
Mineral Areas Syndicate, Ltd	Toronto	April 25	3,000,000
Mississauga Mines, Ltd	Toronto	April 12	2,000,000
National Gravel & Fuel, Ltd	Windsor	Mar. 27	100,000
National Pavers, Limited	Windsor	Mar. 27	500,000
Navarre Gold Mines, Ltd	Toronto	Jan. 15	3,000,000
Newfoundland Gull Lake Mines, Ltd	Toronto	Aug. 22	6,000,000
New Havilah Mines, Ltd	Toronto	Feb. 25	5,000,000
Northern Lead Zinc, Ltd	Ottawa	Mar. 8	1,000,000
Ontario Oil and Gas Co., Ltd	Toronto	Sept. 13	1,000,000
Pacaud Copper Mines, Ltd	Toronto	Feb. 9	1,000,000
Parkhill Gold Mines, Ltd	Sault Ste. Marie	April 3	3,000,000
Penn-Ryan Oil and Gas, Ltd	Toronto	Dec. 2	3,000,000
Rabbit Mountain Silver Mines, Ltd	Fort William	Feb. 2	40,000
Realty Securities, Ltd	Toronto	Feb. 20	200,000
Rouillard Gold Mines, Ltd	Haileybury	Feb. 25	3,000,000
Round Lake Copper Mines, Ltd	Toronto	Feb. 23	1,000,000
Seynuck Valley Oil Co., Ltd	Acton	Aug. 8	500,000

*"No par" shares issued in addition. See list of "No par" companies.

MINING COMPANIES WITH SPECIFIED CAPITAL INCORPORATED IN ONTARIO IN 1929—*Continued*

Name of Company	Head Office	Date of Incorporation	Capital
			$
South Kirkland Mines, Ltd	Cobalt	May 11	3,000,000
Spence Development Co., Ltd	Toronto	Mar. 6	3.000,000
*Standard Paving & Materials, Ltd	Toronto	Jan. 25	1,500,000
*Standard White Lime Co., Ltd	Guelph	Oct. 25	200,000
Stewart Cadillac Syndicate, Ltd	Toronto	Feb. 8	40,000
Stratton Oil Company, Ltd., The	Stratton	April 17	100,000
Sulphides Mining & Development, Ltd	Toronto	July 15	5.000,000
*Sun Brick and Tile Co., Ltd	Toronto	Nov. 22	300,000
Teddy Bear Valley Mines, Ltd	Toronto	July 6	10,000,000
Upper Canada Mines, Ltd	Toronto	April 4	2.500,000
Victoria Summerville Lead Mines, Ltd	Toronto	May 2	1,200,000
Walsh-Aguino Mines, Ltd	Sudbury	Feb. 2	3,000,000
Wawa Lead Syndicate, Ltd	Sault Ste. Marie	Feb. 14	100,000
West River Mining Co., Ltd	Toronto	Jan. 3	300,000
Young Munro Gold Mines, Ltd	Toronto	Mar. 8	3,000,000
Total (71 companies)			142,390,000

*"No par" shares issued in addition. See list of "No par" companies.

MINING COMPANIES INCORPORATED IN ONTARIO IN 1929 HAVING SHARES WITHOUT NOMINAL OR PAR VALUE

Name of Company	Head Office	Date of Incorporation	No. of Shares
Argo Gas and Oil Co., Ltd	Chatham	July 15	1,000,000
Associated International Mines, Ltd	Toronto	May 14	5,000,000
Basic Resources, Ltd	Toronto	Nov. 13	200
Beachville Lime & Stone, Ltd	Beachville	Feb. 7	90.000
Ben Nevis Smelting & Refining Co., Ltd	Toronto	April 15	1,000,000
Big Dipper Exploration & Developing Co., Ltd., The	Toronto	Jan. 25	1,000,000
*Bracton, Limited	Toronto	Jan. 14	50,000
Brown-Munro Gold Mines, Ltd	Toronto	Mar. 21	2,000,000
Burgor Prospectors, Limited	Toronto	Nov. 7	100,000
*Clay Industries, Ltd	Aldershot	Nov 9	10,000
Coniaurum Mines, Ltd	Toronto	July 4	6,000,000
Diatomite Products, Ltd	Toronto	June 14	500,000
Duport Mining Co., Ltd	Port Arthur	Jan. 14	2,000,000
Ebonridge Quarries, Ltd	Toronto	Mar. 28	20,000
Humber Gravel Co., Ltd	Toronto	Jan. 11	1,000
Huronian Mining and Finance Co., Ltd	Toronto	Oct. 25	5,000,000
Melzer Mines, Ltd	Toronto	June 11	2,500,000
Mount Roble Company, Ltd	Toronto	April 17	25,000
Nellie Lake Mines, Ltd	Welland	Feb. 1	1,000,000
Niagara Falls Sand & Gravel, Ltd	Niagara Falls	Jan. 9	100,000
Nickel Hill Syndicate, Ltd	Toronto	July 4	100,000
Northern Gravel Co., Ltd	Sault Ste. Marie	Jan. 28	4.000
Northern Properties, Ltd	Toronto	Oct. 30	1,000,000
Olga Gas and Oil Co., Ltd	Toronto	Aug. 8	1,000,000
Patricia Industries, Ltd	Toronto	Dec. 20	100,000
Phoenix Molybdenite Holding Co., Ltd	Toronto	July 31	250,000
Rideau Smelting & Refining Co., Ltd	Smiths Falls	Sept. 7	500,000
Smelters Corporation of Canada, Limited	Toronto	May 16	2.000,000
*Standard Paving & Materials, Ltd	Toronto	Jan. 25	200,000
*Standard White Lime Co., Ltd	Guelph	Oct. 25	5,000
*Sun Brick & Tile Co., Ltd	Toronto	Nov. 22	2.000
Total (31 companies)			32,557.200

*Also see list with specified capital. Five companies having both capital and "No par" shares are included in both lists.

Under the provisions of the Ontario Companies Act, companies of extra-provincial incorporation are required to take out a license in Ontario and stipulate the amount of capital used in connection with mining enterprises where the land is situate within the Province. If land only is held in the Province and business not carried on a license in mortmain is sufficient.

EXTRA-PROVINCIAL AND MORTMAIN MINING COMPANIES LICENSED IN 1929 BY ORDER-IN-COUNCIL

Note.—Where incorporation is outside of Canada the State, or Province is noted.

Name of Company	Date of Incorporation	Date of License (O.C.)	Capital for use in Ontario
			$
Aluminium (VI), Ltd.	Canada*	Jan. 18	40,000
Barbara-Marshay Mines, Ltd	Arizona	Feb. 8	40,000
Canadian Homestake Exploration Co.	South Dakota	May 8	50,000
Eureka Flint & Spar Co., Inc.	New Jersey	May 8	40,000
International Minerals, Ltd	Canada**	Jan. 4	250,000
Kamiskotia Copper Mines, Ltd	Canada**	Jan. 25	100,000
Mormac Development Co., Ltd	Canada**	Aug. 14	40,000
Northern Metals, Limited	Canada**	Sept. 26	50,000
Porcupine Mining & Milling Co., Ltd	Delaware	Mar. 12	250,000
Tonawanda Mines, Ltd	Quebec	Sept. 7	40,000
Towagmac Exploration Co., Ltd	Quebec	Jan. 18	500,000
United Verde Extension Mining Co.	Delaware	April 9	40,000
Ventures Claims, Limited	Canada**	Oct. 25	100,000
Total (13 companies)			1,540,000

*Incorporation under The Companies Act, Revised Statutes of Canada, 1906, Par 1 of Chapter 79.

**License issued pursuant to the provisions of the Mortmain and Charitable Uses Act, Province of Ontario.

Mining Revenue and Expenditures

The revenue of the Department of Mines for the fiscal year ending October 31, 1929, was $882,026.05 as compared with $968,243.84 in the previous year. Details follow:—

ORDINARY:

MAIN OFFICE

Sand and Gravel—			
Royalties	$134,884.74		
Licenses	5,780.00		
		$140,664.74	
Casual Fees		960.29	
Boring Permits		1,608.30	
Sale of Record Books—Unwrought Metal Sales Act		86.00	
Gas Leases		3,750.00	
Dredging		74.50	
Refunds		669.08	
			$147,812.91

BRANCHES

Inspection—Cable Testing Fees		2,111.70
Assessment—Taxes		
Acreage	$33,541.24	
Profit	397,004.41	
Gas	13,602.62	
		444,148.27
Chemical and Assay—Fees		3,586.02

BRANCHES—*Continued*

Mine Rentals—		
Mining Leases	$7,151.19	
Licenses of Occupation	1,948.02	
Miners—		
Licenses	84,571.07	
Permits	1,840.00	
Fees—Recording	83,344.80	
Miscellaneous	4,929.30	
Maps—Sales	2,055.55	
		$185,839.93
Natural Gas Commissioner—Permits		970.69
Temiskaming Testing Laboratories—Fees		17,037.67
Sulphur Fumes Arbitrator—Damages collected		4,006.56
		$805,513.75
CAPITAL:		
Mining Recorders—Mining Land Sales		76,512.30
Total Revenue		$882,026.05

Expenditures of the Department were $364,686.86 ordinary and $5,376.61 capital or a total of $370,063.47.

MINING LANDS SOLD AND LEASED IN YEAR ENDING OCTOBER 31, 1929*

District	Sales			Leases			Total		
	No.	Acres	Amount $	No.	Acres	Amount $	No.	Acres	Amount $
Timiskaming	335	13,037.71	34,979.63	53	2,190.45	1,213.49	388	15,228.16	36,193.12
Cochrane	141	5,545.97	14,848.44	....	....	....	141	5,545.97	14,848.44
Thunder Bay	15	508.30	1,292.00	....	....	....	15	508.30	1,292.00
Sudbury	131	5,532.52	14,841.76	10	480.04	133.65	141	6,012.56	14,975.41
Algoma	49	1,979.56	5,355.65	....	....	....	49	1,979.56	5,355 65
Kenora	5	169.07	429.68	....	....	....	5	169.07	429.68
Patricia	17	421.18	1,052.95	....	....	....	17	421.18	1,052.95
Rainy River	8	295.64	739.10	2	46.40	4.64	10	342.04	743.74
Nipissing	1	50.00	150.00	9	383.60	38.36	10	433.60	188.36
Elsewhere	3	173.00	436.00	....	....	....	3	173.00	436.00
Total	705	27,712.95	74,125.21	74	3,100.49	1,390.14	779	30,813.44	75,515.35

*These figures do not agree with corresponding items of the revenue statement preceding which records collections of moneys actually received during the fiscal year.

SUMMARY OF BUSINESS TRANSACTED IN THE SEVERAL MINING DIVISIONS DURING THE CALENDAR YEAR, 1929

Schedule	*Fort Frances	Sudbury	Porcupine	Larder Lake	Sault Ste. Marie	Port Arthur	Kowkash	Timiskaming and Coleman	Gowganda	Montreal River	Kenora	Red Lake	Total
1. Letters received	356	5,245	2,603	6,799	1,301	3,868	722	1,838	309	393	1,196	2,636	27,266
2. Letters written	450	5,274	2,025	6,653	716	3,190	726	1,586	382	114	1,093	2,391	24,903
3. Miners' Licenses issued	14	711	315	305	227	281	168	310	....	27	242	205	2,835
4. Miners' Licenses renewed	2	1,644	1,060	946	432	757	162	1,018	93	119	177	359	6,769
5. Mining Applications recorded†	70	2,164	650	891	487	691	319	346	34	48	348	973	7,021
6. Mining Applications cancelled	46	2,970	948	855	50	97	15	633	52	70	70	2,284	8,090
7. Agreements, Transfers, etc., recorded	35	1,907	303	811	130	503	123	144	3	19	130	685	4,793
8. Receipts for Miners' Licenses, Permits, Recording Fees, etc. $	809.50	34,603.95	13,888.75	16,734.10	7,573.75	12,313.00	1,561.75	10,259.50	973.25	1,269.50	5,201.45	14,418.25	122,606.75
9. Receipts as Purchase Money or Rental $	1,060.50	7,947.59	8,120.54	26,169.47	1,993.50	875.25	363.00	6,452.83	....	1,201.70	1,029.43	1,300.05	59,513.86
10. Claims of which surveyors' plans were filed	8	24	69	166	22	29	8	17	....	....	47	237	627
11. Disputes entered	....	39	6	8	7	....	....	5	....	....	....	1	66
12. Disputed cases decided by Recorders	....	....	....	....	....	....	....	....	....	....	....	....	....
13. Appeals to Mining Court	....	5	....	....	....	....	....	....	....	....	....	....	5
14. Extensions of time granted	50	1,383	405	1,003	124	356	44	39	5	64	156	1,625	5,254
15. Certificates of Record granted	11	147	86	230	63	42	3	77	....	11	10	17	697
16. Certificates of Performance of Work granted	11	85	101	231	74	5	3	63	....	11	46	43	673
17. Claims for which papers were forwarded to the Department for issue of title	12	87	93	253	56	4	3	72	....	11	10	13	614
18. Forest Reserve Permits issued	....	44	50	1	22	12	8	36	22	....	....	....	195
19. Substitute Miners' Licenses issued	....	15	13	10	1	9	3	23	....	....	1	....	75
20. Abstracts issued	92	6,423	1,332	1,108	153	674	283	155	43	64	316	1,670	12,343
21. Blue prints sold	20	1,622	761	1,426	272	212	68	279	113	166	53	356	5,369

*Report covers the last half of 1929 only. The office was opened July 1, 1929.

†There were 1,186 claims recorded at Toronto, making a total of 8,207 for the entire Province as compared with 15,046 in 1928.

MINING CLAIMS RECORDED IN THE SEVERAL MINING DIVISIONS, 1907 AND 1910-1929

Mining Division	1907	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929
Timiskaming	7,860	1,021	922	516	1,326	215	222	156	269	184	244	329	159	328	971	735	634	438	875	499	346
Coleman*	291	40	*																		
Sudbury	456	1,131	2,309	776	483	237	233	464	262	168	673	267	319	701	436	559	546	1,367	3,351	6,424	2,161
Sault Ste. Marie	291	818	119	137	127	23	92	44	135	199	90	90	216	541	498	284	451	395	735	702	487
Port Arthur	317	207	183	180	182	353	641	172	180	66	171	108	120	296	222	300	494	1,278	982	1.269	691
Kenora		95	89	91		25	23	45	32	48	31	25	53	168	150	77	229	935	140	520	348
Parry Sound†	102	26	15	5		2		10	25	12	39	33									
Larder Lake	3,813	84	1,252	541	1,575	718	915	783	160	423	1,015	712	918	2,344	1,736	1,219	890	1,532	3,141	1,781	891
Montreal River	866	344	98	126	63	28	2	56	294	293	134	81	143	174	400	471	471	290	126	156	48
Gowganda		513	258	194	68	23	14	51	113	52	145	215	101	55	33	444	220	96	24	40	34
Porcupine		2,150	3,756	538	496	240	262	401	236	48	136	192	273	760	1,424	556	620	1,297	3,127	611	650
Kowkash								160	135	2	9	21	3	148	206	438	150	28	250	368	319
Red Lake																		5,827	2,018	1,100	973
Fort Frances‡																					70
At Toronto						49	92	128	95	39	231	87	145	171	116	139	226	203	795	1,576	1,186
Total	13,996	5,792	9,001	3,104	4,320	1,913	2,519	2,470	1,936	1,534	2,918	2,160	2,459	5,686	6,092	5,222	4,751	13,496	15,561	15,046	8,207

*Joined with Timiskaming since 1911. †Office at Parry Sound closed in 1921. Records are now kept at the Department of Mines, Toronto.
‡Fort Frances office established July 1, 1929. Claims (8) recorded at Toronto during first half of year.

STATEMENT OF MONEYS REMITTED BY MINING RECORDERS FOR THE FISCAL YEAR ENDING OCTOBER 31, 1929

Mining Division	Name of Recorder	Address	Purchase Price	Forest Reserve Permits	Miners' Licenses	Recording Fees	Maps	Miscellaneous Fees	Total
Sudbury	McArthur, T. A	Sudbury	$13,605 73	$340.00	$10,891.00	$23,639.00	$423.75	$1,713.75	$50,613.23
Porcupine	Dixon, Redvers	S. Porcupine	9,117.34	500.00	7,062.00	5,774.75	205.25	651.50	23,310.84
Larder Lake	Ginn, H. G	Swastika	33,265.84	10.00	6,510.00	10,593.50	399.50	889.00	51,667.84
Red Lake	Holland, H. E.	Goldpines	1,192.25		2,979.00	13,134.25	136.00	638.00	18,079.50
Kenora	Smith, J. D. C	Kenora	439.43		2,065.00	2,491.00	45.54	140.80	5,181.73
Timiskaming	McAulay, N. J	Haileybury	6,560.06	340.00	6,914.00	2,835.00	71.25	215.75	16,936.06
Port Arthur	McGregor, C. F	Port Arthur	963.25	100.00	5,583.00	7,112.75	66.25	217.75	14,043.00
Gowganda	Coghill, J. M.	Elk Lake		200.00	521.00	220.00	30.75	8.75	980.50
Montreal River	Coghill, J. M.	Elk Lake	1,358.85		742.00	506.50	44.00	45.00	2,696.35
Kowkash	O'Rourke, M. F	Tashota	414.00	80.00	1,574.00	2,137.00	18.25	100.00	4,323.25
Sault Ste. Marie	Miller, W. N.	Sault Ste. Marie	5,755.95	220.00	3,347.00	4,520.00	80.25	275.25	14,198.45
Fort Frances	Alexander, J. A.	Fort Frances	946.50		78.00	458.00	15.00	33.75	1,531.25
Total			$73,619.20	$1,790.00	$48,266.00	$73,421.75	$1,535.75	$4,929.30	$203,562.00

Under the Mining Tax Act, a graduated tax is levied on the net profits of mining companies in excess of $10,000 per annum. The basic rate is 3 per cent. The following statement, prepared by the Accounts Branch of the Department, gives details of the Profit Tax collected under the supervision of G. R. Mickle, Mine Assessor, for the fiscal year ending October 31, 1929:—

DETAILS OF PROFIT TAX

GOLD:—		
Dome Mines, Ltd.	$18,356.83	
Hollinger Consolidated Gold Mines, Ltd	19,806.60	
Lake Shore Mines, Ltd.	47,081.85	
McIntyre Porcupine Mines, Ltd.	17,877.47	
Sylvanite Gold Mines, Ltd	899.17	
Teck-Hughes Gold Mines, Ltd.	78,463.00	
Wright-Hargreaves Mines, Ltd.	3,609 86	
*Vipond Consolidated Mines, Ltd.	1,474.35	
		$187,569.13
SILVER:—		
*Keeley Silver Mines, Ltd.	$241.03	
Nipissing Mining Co., Ltd.	3,578.62	
		3,819.65
NICKEL-COPPER:—		
International Nickel Co. of Canada, Ltd	$184,495.76	
Mond Nickel Co., Ltd.	21,119.87	
		205,615.63
Total		$397,004.41

Temiskaming Testing Laboratories

This plant, which is located at Cobalt and is equipped for sampling and assaying, has been operated by the Ontario Department of Mines since July, 1921, under the management of A. A. Cole, Mining Engineer of the T. & N. O. Railway Commission, and George Dickson, Superintendent.

The following is a comparative financial report for the years 1922 to 1929, inclusive:—

COMPARATIVE FINANCIAL STATEMENT OF THE TEMISKAMING TESTING LABORATORIES, 1922–1929

Year	Cash receipts	Earnings	Expenditures	Operating Profit	Operating Loss
1922	$18,096.19	$17,749.51	$19,173.19	....	$1,424.68
1923	18,699.22	20,117.81	19,781.25	$336.56	....
1924	26,032.20	25,417.61	23,206.66	2,200.95	....
1925	19,922.37	20,041.08	20,043.31	....	2.23
1926	20,302.51	21,119.98	20,658.19	461.79	....
1927	19,387.66	19,400.55	20,012.09	....	611.54
1928	14,875.58	14,369.66	18,181.68	....	3,812.02
1929	19,604.70	21,690.60	18,088.41	3,602.19	....

Following is a brief statement of the work of the year 1929:—

Assaying.—Gold, 3,930 samples; silver, 1,869; copper, 1,526; silver bullion, 92; cobalt, 309; nickel, 130; zinc, 151; lead, 60; silica, 88; chromium, 16; arsenic, 13; iron, 12; platinum, 11; tin, 7; miscellaneous, 5.

Ore Testing.—Three concentration tests.

Silver-Cobalt Ore Milled and Sampled.—Lots, 78; weight, 703.62 tons; silver content, 1,302,838 ounces.

Base Bullion Melted.—90 bars containing 75,315 gross ounces of silver.

Gold Ore Purchased.—Two lots or 11 tons, for which $482.03 was paid.

Gold Ore Shipped.—One lot to Noranda smelter, 18.14 tons; value, $1,143.37.

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* Through a clerical error items of $1,071.84 for Vipond and $9,019.99 for Keeley were included with Acerage Tax instead of Profit Tax for the fiscal year ending October 31, 1929.

Draughting Office, North Bay

In order to cope with the demand from prospectors and others for blue prints showing mining claims in good standing in the several Mining Divisions of the Province, apart from the Divisions served direct from Toronto, the Department of Mines established a Draughting Office at North Bay in February, 1920, with C. G. Watson in charge. As mining claims are recorded in each Mining Division, sketches and recording notices are forwarded by the Recorders to the Draughting Office, and the same practice applies when surveys are filed. Tracings are prepared from the data furnished and blue prints supplied to the Recorders and to the general public at a nominal charge. North Bay is a convenient centre and considerable time is saved through the mails compared with former practice when blue prints were prepared at Toronto. The office is equipped with an electric blueprinting machine.

During the fiscal year ending October 31, 1929, there were 1,772 blue prints distributed from the North Bay office, and total receipts from this source were $513.30. In addition maps were supplied by this office to Mining Recorders, who sold 5,369 blue prints during the calendar year 1929.

Provincial Assay Office

As an aid in the development of the mineral resources of Ontario an Assay Office was established at Belleville in July, 1898, by the Bureau (now Department) of Mines. For convenience the office was moved to 5 Queen's Park, Toronto, in November, 1911, and again in the spring of 1927 to the new East Block of the Parliament Buildings.

The Provincial Assayer, W. K. McNeill, reports as follows for 1929:—

FREE ASSAYS UNDER THE PROVISIONS OF THE MINING ACT OF ONTARIO

Mining Division	Number of Samples received for Free Assays during 1929											
	Gold	Silver	Copper	Lead	Zinc	Tin	Nickel	Iron	Sulphur	Silica	Cobalt	Total
Eastern Ontario*....	5	3	6	.....	.....	2	2	2	.....	.....	.....	20
Fort Frances*.......	14	9	1	1	.....	.....	.....	.....	.....	.....	.....	25
Kenora.............	4	3	1	.....	1	.....	.....	1	.....	.....	.....	10
Patricia portion...	36	5	4	2	2	2	.....	1	.....	.....	2	54
Kowkash............	9	4	1	.....	.....	.....	.....	.....	.....	.....	.....	14
Larder Lake.........	57	9	20	1	3	3	.....	.....	.....	.....	.....	93
Mississagi Reserve*..	9	10	5	.....	1	.....	.....	.....	.....	.....	.....	45
Montreal River.....	7	5	1	.....	.....	1	1	.....	.....	.....	.....	13
Porcupine..........	18	7	7	.....	5	.....	.....	1	.....	.....	.....	38
Gowganda..........	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
Port Arthur........	31	11	10	.....	.....	.....	.....	4	.....	.....	.....	56
Red Lake..........	32	.....	.....	1	1	.....	.....	.....	.....	.....	.....	34
Sault Ste. Marie.....	31	7	11	3	.....	.....	1	3	1	.....	.....	57
Sudbury............	43	14	28	10	10	2	2	14	.....	1	1	125
Timagami Reserve*..	2	2	3	1	.....	1	2	.....	.....	.....	.....	11
Timiskaming	23	14	11	3	1	.....	.....	.....	.....	.....	.....	52
Total†.........	332	104	119	22	24	10	7	26	1	1	3	649

*All mining claim records for these Divisions are kept at the office of the Deputy Minister of Mines, Toronto.

†Total free assays in 1928 numbered 1,316.

The Assay Office has been in operation without interruption during the entire year and the usual variety of work has been done with the assistance of T. E. Rothwell and W. F. Green, Chemists and Assayers, also Robert Stewart, Reginald Eyre, and William Ley, Laboratory Assistants.

The following is a statement of the samples submitted by the general public for which the regulation fee was charged, and also those submitted by geologists and officers of the Department of Mines.

CUSTOMS ASSAYING AND GENERAL WORK, 1929

Assay	Number of samples
Gold	650
Silver	185
Copper	309
Lead	34
Zinc	68
Nickel	140
Iron	9
Platinum	10
Tin	7
Sulphur	2
Limestone	17
Phosphorus	4
Cobalt	19
Titanium	4
Coal	71
Carbon	4
Radium	3
Alumina	3
Insoluble	2
Graphite	2
Chromium	2
Vanadium	2
Clay	2
Miscellaneous	10 others were tested. These included 1 each of palladium, uranium, antimony, manganese, arsenic, gypsum, phosphorus, silica, potash, and marl.
Identification	134 samples were received by mail and reports issued. A large number were brought directly to the Laboratory; of these no record was kept.
Rocks	20 samples were submitted by geologists of the Department of Mines for complete analysis.
Total	1,612 as compared with 4,112 in 1928.

The schedule of charges, effective Jan. 1, 1930, for the Provincial Assay Office and Chemical Laboratory is as follows:—

TARIFF OF FEES FOR ANALYSES AND ASSAYS

	Fee
1. Assays:	
Gold	$1.50
Silver	1.50
Gold and silver in one sample	2.50
Platinum metals	Prices on application
2. Iron Ores:	
Iron (metallic)	$1.50
Silica	1.50
Iron and insoluble residue	2.50
Ferrous oxide	2.00
Phosphorus	3.00
Sulphur	2.50
Manganese	3.00
Titanium	4.00
Complete analysis	Prices on application

TARIFF OF FEES FOR ANALYSES AND ASSAYS—*Continued*

3. *Limestones, Dolomites, Marls, Clays, Shales:*

Determination of:

Insolubiles	$1.50
Silica	3.50
Ferric iron	3.00
Ferrous iron	2.00
Alumina	3.00
Lime	2.50
Magnesia	3.50
Potash	6.00
Soda	6.00
Alkalies (in one sample)	8.00
Water (combined)	2.00
Moisture	1.00
Carbon dioxide	4.00
Sulphur	2.50
Phosphorus anhydride	3.00

4. *Examination of Clay, Shale, or Cement Rock for Cement Manufacture:*

Determination of:

Silica, Iron oxide, Alumina, Lime, Magnesia, Sulphur, and Volatile matter, Prices on application

5. *Coke, Coal, Peat, etc.:*

Determination of:

Moisture	$1.00
Volatile combustible	1.50
Fixed carbon	1.50
Ash	1.50
Sulphur	2.50
Phosphorus	3.00
Calorific value (B.t.u.)	5.00
Ultimate analysis	Price on application

6. *Mineral Waters* .... Price on application

7. *Ores and Minerals:*

Determination of:

Alumina	$3.00
Antimony	4.00
Arsenic	3.00
Bismuth	4.00
Cadmium	4.00
Chromium	6.00
Cobalt	5.00
Nickel	3.00
Cobalt and Nickel in same sample	6.00
Copper	1.50
Fluorine	4.00
Lead	1.50
Molybdenum	4.00
Manganese	3.00
Tin	5.00
Zinc	3.00
Mercury	5.00

8. *Rocks, Complete Analysis* .... Price on application

9. *Slags, Sand, etc.* .... Price on application

10. *Identification of Minerals and Rocks not Requiring Chemical Analysis* .... Free

11. *Test for Radio-Activity* .... Free

Any analytical work not specified in this list will be undertaken on application to the Provincial Assayer.

The pulp of each sample is retained for future reference.

DIRECTIONS

Samples will be dealt with in the order of their arrival. In every instance specimens and samples should be accompanied by statement specifying the precise locality whence they were taken.

TERMS

Money in payment of fees, sent in by registered letter, post office order, postal note, or express order, and made payable to the Provincial Assayer, must invariably accompany sample to ensure prompt return of certificate, as no examination is commenced until the regulation fee is paid.

Crushed samples representing large quantities, or samples less than one pound weight, may be sent by mail as third-class matter. Write your name and address plainly on each parcel. Send instructions, with money in payment of fees, in a separate letter. Samples may be sent by express, charges prepaid.

Sample bags addressed to this laboratory for sending ore pulp by mail may be obtained free on application; also canvas bags for shipping.

Samples should be addressed as follows:

PROVINCIAL ASSAY OFFICE,
East Block, Parliament Bldgs.,
TORONTO, ONT.

Departmental Correspondence

The volume of correspondence necessary for the work of the Department of Mines at Toronto is considerable. Figures supplied by the Files Branch show that for the fiscal year ending October 31, 1929, communications received numbered 29,483.

Correspondence in connection with the office of the Minister of Mines is not included, nor is that pertaining to applications for patent or lease of mining lands,—the latter files being kept in the Department of Lands and Forests.

In addition, Branches of the Department, including offices of the Mine Assessor, Mining Court, Mines Inspection, Publications and Statistics, Assay Office, and Gas Commissioner, carry on correspondence independently.

CLASSES FOR PROSPECTORS, 1929-30

By E. M. Burwash

Introduction

During the past winter the usual classes for prospectors were carried on by the writer, who held sessions at fourteen points in or adjacent to the mineral areas of the province. The places visited this winter were, with two exceptions, the same as a year earlier. Fort William and Fort Frances were substituted for Chapleau and Iroquois Falls.

The work was conducted on lines similar to those which have been in use for several years past. Eight daytime classes were held for the study of minerals and rocks. Eight specimens on the average were examined each day and identified by the class by means of Dr. Goodwin's tables for determination of minerals and rocks by easily applied field tests. This method gives two valuable results: first, an acquaintance gained by close observation of the properties of the different mineral and rock species, which is the necessary training for accurate identification or spotting in the field; and second, a development of facility in the use of the tables themselves. This is the only way by which the user of the tables can be sure of reliable results in the determination of unfamiliar species.

Short discussions were held on the composition, determinative points, and economic uses of each mineral; and a scheme of rocks was worked out with the object of training the students on the meaning of the textures and mineral composition of the igneous rocks and the origin and depositional conditions of the sediments. An idea of the causes and successive steps in metamorphism was also roughly outlined. The mineral tables depend on the properties of lustre, colour, streak, hardness, and cleavage for the principal divisions and subdivisions in about the order named, and subordinately on specific gravity, crystal form, reaction to acid (for carbonates), odour, feel, elasticity, etc. In the rock tables, structure, texture, and hardness are the leading heads; and mineral composition, colour, odour, and weathering are subordinate.

Attendance

Following the curve of recent years the attendance this year shows a continued decline, though not as great either absolutely or relatively as that of last year. The collapse of the stock markets in November, 1929, appears to have caused a considerable shortage of funds available for advances to prospectors, with the result that a large number of claims have been allowed to lapse, and men have turned their attention to other work that does not allow of time for attendance at classes. It is noticeable that the attendance before Christmas showed a marked decrease, and afterwards the attendance in places where the courses were given last year showed in most cases a decline or only a slight gain. The most notable exception to this rule is Haileybury, the last place visited, where the classes during the last three winters have shown a steady increase, numbering 48, 60, and 66 in successive years. In the two cases where classes have not been held for two years, the attendance has also increased slightly. It would appear that at least in the small places it is better to avoid holding classes in successive years.

The average attendance during 1929-30 was 45.8 per cent. of the registration.

The subjoined table furnishes the data on which the above conclusions are based.

TABLE OF ATTENDANCE

Analysis of results for 1929-30 (with comparative figures for last visit at the same point)

Place	Dates	Mineralogy			Geology, (evening lectures), average attendance		Total study and lecture periods		Increase	Decrease
		Registration		Average attendance						
		1929-30	1928-29	1929-30	1929-30	1928-29	1929-30	1928-29		
	1929								per cent.	per cent.
Ottawa	Nov. 7-15	10	8	5	12	11	100	85	17.6	
North Bay	Nov. 18-26	5	4	3	44	18	245	180	36.1	
Sudbury	Nov. 28-Dec. 6	5	16	2½	8	12	59	117		49.5
Sault Ste. Marie	Dec. 9-17	24	28	15½	14	9	193	184	4.9	
	1930									
Port Arthur	Jan. 6-14	17	21[1]	10	15.5	23[1]	153	183[1]		16.4
Fort William	Jan. 16-24	29	24	19	32	30	311	232	34	
Fort Frances	Feb. 6-14	19	18[2]	10.5	14.4	16[2]	156	157[2]		.6
Mine Centre	Jan. 27-Feb. 3	16	28	10	29	37	215	286		24.8
Kenora	Feb. 17-25	15	27	9	12	22.4	136	244		44.2
Sioux Lookout	Feb. 27-Mar. 7	21	26	10	21	25	188	247		23.88
Timmins	Mar. 10-18	21	17	11	20	21	191	189	1.06	
Matheson	Mar. 20-28	11	47	6.6	21	54	158	453		65.12
Kirkland Lake	Mar. 31-Apr. 8	22	29	14.6	38	30	286	266	7.5	
Haileybury	Apr. 9-17	66	60	22	20	23	349	277	25.99	
Total	Nov. 7-Apr. 17	281	353	128.7	301	331.4	2,740	3,100		11.61
Average		20.7	25.2	9.2	21.5	23.7	195.7	221.4		

[1] 1928.
[2] 1929.

Acknowledgments

Grateful acknowledgements for interest and assistance are due to the following gentlemen, who in many cases have devoted a portion of their time and influence to the support of the classes during a series of years.

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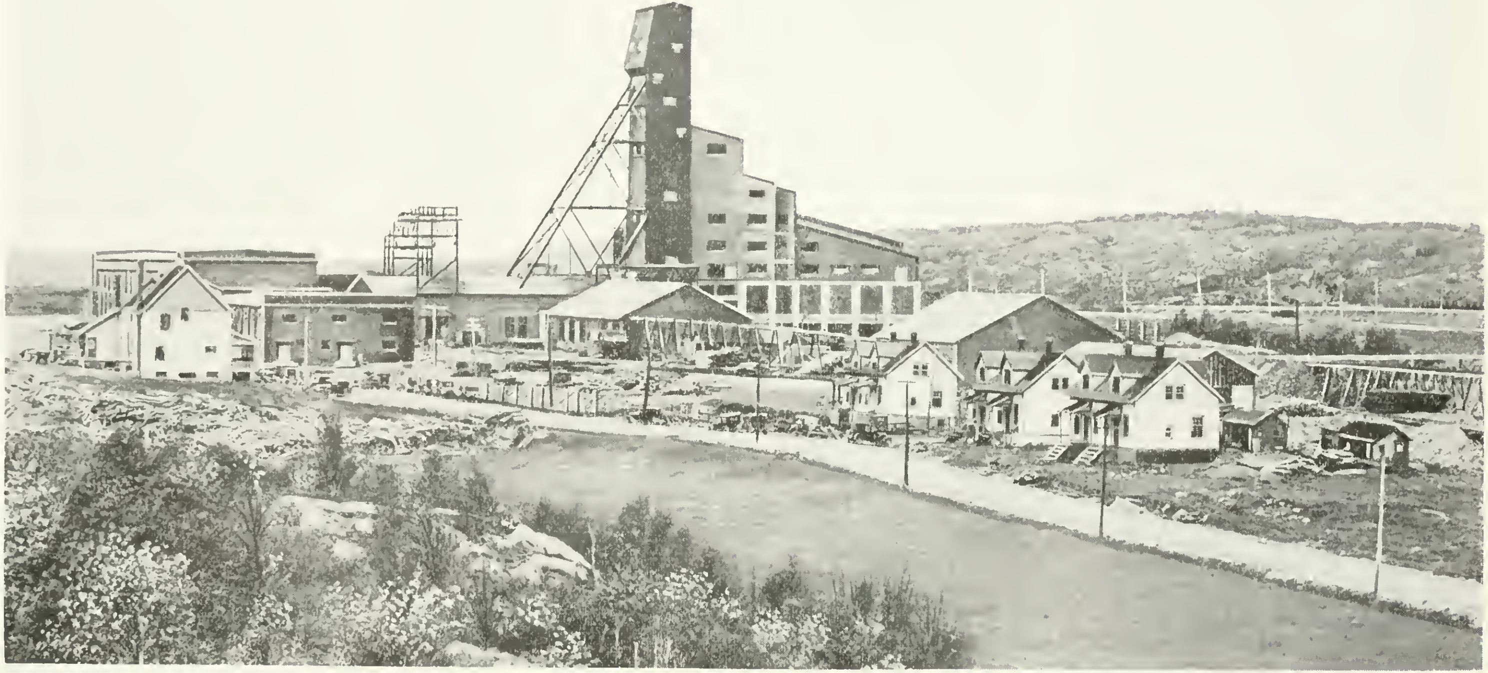

No. 3 shaft of the Frood mine, looking west, June, 1929. Office and change-house in foreground, power-house on left, rock-house and 147-foot headframe in rear.

MINES OF ONTARIO IN 1929

By

Chief Inspector of Mines, D. G. Sinclair, Toronto; Inspectors, R. H. Cleland, Timmins; E. C. Keeley, Kirkland Lake; D. F. Cooper, Sudbury; A. R. Webster, Toronto.

As an introduction to the descriptions of the mines and metallurgical plants of the province, the following list, alphabetically arranged for metals or minerals extracted and also for the names of the companies concerned, may be of use for reference purposes. The inclusion of a property in this list does not necessarily imply that it is a producing one or that it is being worked at the present time. The table contains the names of all operating properties and works inspected in 1929.

MINES AND METALLURGICAL WORKS

Operator	Mine	Manager	Address
AERIAL PROSPECTING			
Brett-Trethewey Mines, Ltd			43 Toronto St., Toronto.
Consolidated Mining and Smelting Co. of Canada, Ltd.			Drummond Bldg., Montreal.
Dominion Explorers, Ltd			914 Excelsior Life Bldg., Toronto.
Northern Aerial Minerals Exploration, Ltd.		J. E. Hammell	100 Adelaide St. W., Toronto.
Prospectors, Limited			Haileybury.
CHROME			
Consolidated Chromium Corporation		A. R. Globe	Allanwater, via Collins.
COPPER			
Amity Copper and Gold Mines, Ltd	Amity	Sidney A. Pain	Boston Creek.
Patterson Copper Mines, Ltd	Patterson	James Houston	Boston Creek.
Shield Development Co., Ltd	Tip Top	J. G. Harkness	Kashabowie.
Sudbury Basin Mines, Ltd	Cheney		914 Excelsior Life Bldg., Toronto.
White Lake Mines, Ltd	White Lake	O. G. Carstens	Blind River.
COPPER-ZINC-LEAD			
Treadwell Yukon Co., Ltd	Errington	V. C. Clauson	Bradley.
FELDSPAR			
Bathurst Feldspar Mines, Ltd	Bathurst	J. E. Sullivan	R.R. 7, Perth.
Craig, T. H	Craig	T. H. Craig	P.O. Box 300, Perth
Feldspar Quarries, Ltd	Bowes, Furlong, and Foster	Stanton G. Smith	Perth.
Genesee Feldspar Co., Inc	Richardson and Genesee	P. MacDonald	Hybla.
National Feldspar Co., Ltd	National	W. J. McCallum	R.R. 7, Perth.
Verona Quarries, Ltd	Verona	C. A. McMahon	Desert Lake.
Wanup Feldspar Mines, Ltd	Wanup	J. G. Anderson	Perth.

MINES AND METALLURGICAL WORKS—*Continued*

Operator	Mine	Manager	Address
GOLD			
Ankerite Gold Mines, Ltd	Ankerite	W. H. Seamon	South Porcupine
Baldwin Kirkland Gold Mines, Ltd	Baldwin Kirkland	S. L. Macdonald	690 Danforth Ave., Toronto
Barry-Hollinger Gold Mines, Ltd	Barry-Hollinger	James Houston	Boston Creek.
Bathurst Mines, Ltd	Bathurst	Frank Carnegie	Narrow Lake.
Beardmore Gold Mines, Ltd	Beardmore	W. A. Roberts	Beardmore.
Bobjo Mines, Ltd	Bobjo	G. A. Howes	Sioux Lookout
British Canadian Mines, Ltd	Foley	J. M. Aitken	8 Bloor St. E. Toronto.
Buckingham Mines, Ltd	Buckingham		116 Federal Bldg., Toronto.
Canadian Champion Reef Mining Co., Ltd.	Champion Reef		1302 Canada Permanent Bldg., Toronto.
Central Patricia Mines, Ltd	Central Patricia	A. J. Keast	c/o Western Canada Airways, Allanwater.
Coniaurum Mines, Limited	Coniaurum	John Redington	Schumacher.
Cooper Gold Mines, Ltd	Jubilee	John Knox, Jr.	Wawa, via Hawk Junction.
De Santis Gold Mining Company, Ltd. (under option)	De Santis	Peter De Santis	Timmins.
Dome Mines, Ltd	Dome	H. P. De Pencier	South Porcupine.
Dunkin Gold Mines, Ltd	Dunkin		Northern Ontario Bldg., Toronto.
Golden Summit Mines, Ltd	Golden Summit	Wm. J. Simpson	Sesekinika.
Gold Rock Mines, Limited	Haycock	Miles Walker	Wabigoon.
Haslat-Duck Lake Mines, Ltd	Haslat-Duck Lake	M. L. Bouzan	202 Hamilton Trust Bldg., Toronto.
Hayden Gold Mines, Ltd	Hayden	Seymour Stevens	Timmins.
Hollinger Cons. Gold Mines, Ltd	Hollinger	A. F. Brigham	Timmins.
Horse shoe Mines, Ltd	Regina	C. W. Dalby	801 Excelsior Life Bldg., Toronto.
Howey Gold Mines, Ltd	Howey	H. G. Young	Red Lake, via Sioux Lookout.
Jackson-Manion Mines, Ltd	Jackson-Manion		1507 Bank of Hamilton Bldg , Toronto.
Jones Porter Mines, Ltd	Jones Porter	John Jones	Box 1330, Timmins.
Kirkland Lake Gold Mining Co., Ltd	Kirkland Lake Gold	W. M. Sixt	Kirkland Lake.
Lake Shore Mines, Ltd	Lake Shore	E. B. Knapp	Kirkland Lake.
McIntyre-Porcupine Mines, Ltd	McIntyre	R. J. Ennis	Schumacher.
McMillan Gold Mines, Ltd	McMillan	E. J. McMillan	Sudbury.
March Gold, Ltd	March	M. Knutson	Box 533, South Porcupine
Metals Development, Ltd	Metals Development.	J. C. Nelson	Jackson-Manion.
Mineral Research Corporation	Davidson-Carr	A. R. Globe	Savant Lake.
Moss Mines, Ltd	Huronian	J. G. Harkness	Kashabowie.
Patricia Dent Gold Mines, Ltd	Patricia Dent	J. C. Dodd	Jackson-Manion.
Polaris Gold Mines of Canada, Ltd	Polaris	W. C. Churchill	Box1691,Timmins.
Porcupine United Gold Mines, Ltd	Rochester	Jos. T. Baldwin	Timmins.
Power and Mines Corporation, Ltd	Grace	C. A. Chisholm	1254 St. Catherine St. W., Montreal.
Ridgedome Mines, Ltd	Ridgedome	C. J. B. Armstrong	Timmins.
Ritchie Gold Mines, Ltd	Ritchie		11 King St. W., Toronto.

MINES AND METALLURGICAL WORKS—*Continued*

Operator	Mine	Manager	Address
GOLD—*Continued*			
St. Anthony Gold Mines, Ltd	St. Anthony	H. A. Swart	Savant Lake.
Sylvanite Gold Mines, Ltd	Sylvanite	C. E. Rodgers	Kirkland Lake.
Tashota Gold Mines, Ltd	Tashota		1111 Beaver Hall Hill, Montreal.
Teck-Hughes Gold Mines, Ltd	Teck-Hughes	D. L. H. Forbes	Kirkland Lake.
Telluride Gold Mines of Canada, Ltd	Telluride	H. Hollands-Hurst	Englehart.
Trethewey-Ossian Mines, Ltd	Trethewey-Ossian	Sidney A. Pain	Boston Creek.
United Mineral Lands Corp	Paymaster	M. Donovan	South Porcupine.
Vipond Consolidated Mines, Ltd	Vipond	Robert E. Dye	Timmins.
West Dome Lake Gold Mines, Ltd	West Dome	D. M. McPhail	South Porcupine.
Wright-Hargreaves Mines, Ltd	Wright-Hargreaves	M. W. Summerhayes	Kirkland Lake.
GRAPHITE			
Black Donald Graphite Co., Ltd	Black Donald	R. F. Bunting	Calabogie.
GYPSUM			
Canada Gypsum and Alabastine, Ltd	Caledonia	L. V. Robinson	Caledonia.
Canada Gypsum and Alabastine, Ltd	Lythmore	L. V. Robinson	Caledonia.
LEAD			
Kingdon Mining, Smelting and Manufacturing Co., Ltd.	Kingdon	R. R. Rose	Galetta.
LEAD AND ZINC			
Lake Geneva Mining Co., Ltd	Lake Geneva	W. E. Bawden	Sudbury.
North American Metals Corp., Ltd	Dorion	H. E. Knobel	Loon.
North American Metals Corp., Ltd	Ogema	H. E. Knobel	Loon.
NICKEL AND COPPER			
Falconbridge Nickel Mines, Ltd	Falconbridge	Ernest Craig	Garson.
International Nickel Co. of Canada, Ltd.	Creighton	R. D. Parker	Creighton Mine.
International Nickel Co. of Canada, Ltd.	Frood	G. L. Helmrich	Frood Mine.
International Nickel Co. of Canada, Ltd.	Garson	W. J. Mumford	Garson.
International Nickel Co. of Canada, Ltd.	Levack	A. L. Sharp	Levack.
McVittie-Graham Mines, Ltd	Moose Lake	W. E. Segsworth	67 Yonge St., Toronto.
Sudbury Offsets, Limited	Sudbury Offsets		1004 Bank of Hamilton Bldg., Toronto.
SILVER			
Agaunico Cobalt Mines, Ltd	Agaunico	J. M. C. Dunlop.	North Cobalt.
Blair Gowganda Silver Mines, Ltd	Blair Gowganda	M. D. Kennedy	Gowganda.
Brocklebank, Arthur (under lease)	Kerr Lake	Arthur Brocklebank	Cobalt.
Cain, C. E., and Associates	Beaver	C. E. Cain	Cobalt.

MINES AND METALLURGICAL WORKS—*Continued*

Operator	Mine	Manager	Address
SILVER—*Continued*			
Castle-Trethewey Mines, Ltd.	Castle	Angus D. Campbell	Bestel.
Chitty, F. L. (under lease)	Badger	F. L. Chitty	Cobalt.
Clemens, E. H. (under lease)	Coniagas	E. H. Clements	Cobalt.
Cobalt Contact Mines, Ltd	Green-Meehan	J. M. C. Dunlop	North Cobalt.
Cobalt Contact Mines, Ltd	Red Rock	J. M. C. Dunlop	North Cobalt.
Cobalt Contact Mines, Ltd. (under option)	Ruby	J. M. C. Dunlop	North Cobalt.
Cobalt Kittson Mines, Ltd	Cobalt Kittson	A. J. Pidgeon	Cobalt.
Friday Mines, Ltd	Friday	J. R. Sproat	Timagami.
Keeley Silver Mines, Ltd	Keeley	W. J. Dobbins	Silver Centre.
McLeod, J. H., and Price, C. W. (under lease)	Foster	J. H. McLeod	Cobalt.
Martin, George (under lease)	Crown Reserve	George Martin	Cobalt.
Mining Corporation of Canada, Ltd	Buffalo	Arnold Smith	Cobalt.
Mining Corporation of Canada, Ltd	City	Arnold Smith	Cobalt.
Mining Corporation of Canada, Ltd	Crompton	Arnold Smith	Cobalt.
Mining Corporation of Canada, Ltd	Frontier	Arnold Smith	Cobalt.
Mining Corporation of Canada, Ltd	H. R. 64	Arnold Smith	Cobalt.
Mining Corporation of Canada, Ltd	McKinley-Darragh	Arnold Smith	Cobalt.
Mining Corporation of Canada, Ltd	Nancy Helen	Arnold Smith	Cobalt.
Mining Corporation of Canada, Ltd	Townsite	Arnold Smith	Cobalt.
Morrison Mines, Ltd	Morrison	Horace F. Strong	Gowganda.
Nipissing Mining Co., Ltd	Nipissing	Hugh Park	Cobalt.
O'Brien, M. J., Ltd	Cross Lake	W. A. O'Flynn	Cobalt.
O'Brien, M. J., Ltd	Miller Lake O'Brien	H. G. Kennedy	Bestel.
O'Brien, M. J., Ltd	O'Brien	W. A. O'Flynn	Cobalt.
Peterson Cobalt Mines, Ltd	Peterson Cobalt	D. J. Russell	Cobalt.
Sandoe, Richard, and Moyle, H. (under lease)	Temiskaming	Richard Sandoe	Cobalt.
Sequin, H. (under lease)	Cobalt Comet	H. Seguin	Cobalt.
Shaw, John W., and Associates (under lease)	Aladdin	John W. Shaw	Cobalt.
Shaw, John W., and Associates (under lease)	Chambers-Ferland	John W. Shaw	Cobalt.
Shaw, John W., and Associates (under lease)	Trethewey	John W. Shaw	Cobalt.
Smith, W. H. (under lease)	Hudson Bay	W. H. Smith	Cobalt.
Trembath, Thomas E., and partner (under lease)	La Rose	Thomas E. Trembath	Cobalt.
TALC			
Canada Talc Co., Ltd	Asbestos Pulp	Roy Taylor	Madoc.
Geo. H. Gillespie Co., Ltd	Henderson	Geo. H. Gillespie	Madoc.
METALLURGICAL WORKS			
Algoma Steel Corporation, Ltd	Blast furnace	Jas. H. Bell	Sault Ste. Marie.
Cobalt Reduction Co., operated by Mining Corporation of Canada, Ltd.	Silver refinery	M. F. Fairlie	Cobalt.
Deloro Smelting and Refining Co., Ltd.	Silver refinery	S. B. Wright	Deloro.
International Nickel Co. of Canada, Ltd.	Blast furnace	Peter Macdonald	Copper Cliff.
International Nickel Co. of Canada, Ltd.	Blast furnace	John F. Robertson	Coniston.
International Nickel Co. of Canada, Ltd.	Nickel refinery	H. W. Walter	Port Colborne.
Steel Company of Canada, Ltd	Blast furnace	R. A. Gillies	Hamilton.

AERIAL PROSPECTING

Northern Aerial Minerals Exploration, Limited

This company operates under a Dominion charter with a capitalization of 100,000 preferred shares of $50 each and 250,000 common shares without nominal or par value. The officers and directors of the company are as follows: J. E. Hammell, Toronto, president; Robert Fennell, Toronto, secretary; A. L. Smith, James A. Richardson, E. H. Rose, directors. The head office is at 1402 Concourse Building, 100 Adelaide Street West, Toronto.

The aerial base and field headquarters are at Sioux Lookout on the main line of the Canadian National railway. From here prospecting parties are sent by aeroplane to favourable areas previously located by field engineers on reconnaissance flights.

The most favourable ground prospected and staked in the province last year by this company was in the Crow River area. Fifty-two claims, in two groups, were staked on a very promising showing. During the summer and winter of 1929-30, stripping and trenching disclosed a break of 900 feet, of which 250 feet showed values of $12.50 over 10-foot widths. Diamond-drilling has proved that these values are maintained to a depth of 150 feet.

CHROME

Consolidated Chromium Corporation

This company was incorporated under the laws of the state of Delaware on November 19, 1929. The authorized capital stock is 500,000 shares of class "A" stock, par value $25 per share, and 1,500,000 shares of common stock of no par value. The officers of the company are: R. S. McClellan, president; J. C. Parkes, vice-president; F. C. Russell, secretary-treasurer; W. B. Wallder, assistant vice-president; James P. Ronaghan, assistant secretary; C. B. Reinold, assistant secretary. The directors are: R. S. McClellan, F. C. Russell, Charles Cason, C. V. Bob, J. C. Parkes.

The company was formed to acquire the rights under options granted to L. P. Jubien, Suite 1636, 120 Broadway, New York, on some 40 claims, as well as the interest in 15 claims staked by Mr. Jubien and his associates on chromite-bearing ground south of Collins and west of Lake Nipigon in the Thunder Bay district. It is proposed to form a Canadian subsidiary for the purpose of acquiring title to these mining claims.

The following is a résumé of A. R. Graham's report to the Ontario Department of Mines on the geological features of the deposit: The segregations and injections of chromite ore lie near the footwall side of an elliptical-shaped peridotite dike some $3\frac{3}{4}$ miles long and three-quarters of a mile wide at its widest point.

The dike is intrusive in the contact zone between a Laurentian granite, altered to gneiss near the contact, and the earlier volcanics. These volcanics near the contact have been altered to micaceous schists and recrystallized greenstone.

Mr. Jubien states that some eighteen exposures of chromite have been found over a total length of 18,000 feet in a footwall zone about 600 feet wide. The chromite occurs in the form of wide segregations of low- and medium-grade material, in which occur presumably later injections of high-grade material. The widths of these occurrences are exceptional, as high-grade exposures have been found over widths as great as 17 feet with good and medium-grade exposures in widths up to nearly 50 feet.

Surface work on the property started in the late fall of 1929, when camps for the accommodation of 40 men were erected. Since that time

10 diamond-drill holes have been put down from surface, a shaft has been sunk 100 feet, and some cross-cutting has been done.

Concentrating tests made on the ore from the deposit have shown that it will be possible to market a product in the neighbourhood of 55 per cent. Cr_2O_3.

COPPER

Amity Copper and Gold Mines, Limited

Amity Copper and Gold Mines, Limited, operated during 1929 at Boston Creek, Pacaud township, district of Timiskaming, with a force of 20 men. The capital is 3,000,000 shares of $1 par value. D. O. Johnson is president; J. E. Russell, vice-president; Gideon Grant, secretary-treasurer; Samuel Squires, F. L. McLean, and R. Jackson are directors. Sidney A. Pain is manager. The head office of the company is at 501 Lumsden Building, Toronto.

The development work for 1929 is as follows: The shaft was sunk from the 475-foot level to the 965-foot level, and stations were cut on the 475-, 600-, 735-, and 866-foot levels; 1,188 feet of crosscutting and drifting was done on the 475- and 600-foot levels. Three cars of ore were shipped to Noranda.

Patterson Copper Mines, Limited

Patterson Copper Mines, Limited, operated their property in the township of Pacaud, district of Timiskaming, with a force of 30 men, from January till October, 1929, when the mine closed down. The officers and directors of the company are: Dana H. Porter, president; R. A. Whitely, treasurer; James Houston, manager. The head office of the company is at 504 General Assurance Building, Toronto.

The three-compartment shaft was sunk 390 feet, and the following development work done:—

Level	Station	Crosscuts	Drifts	Total
	feet	feet	feet	feet
125-foot	17.60	70.60	568.80	656.00
250-foot	37.20	303.95	660.80	1,000.95
375-foot	21.33	8.83	....	30.16
500-foot	34.75	361.70	569.90	966.35
Total	110.88	745.08	1,799.50	2,655.46

Shield Development Company, Limited

This company has an authorized capitalization of 2,000,000 shares of no par value, of which 1,059,350 shares have been issued.

The officers and directors are: N. R. Fisher, president and managing director; Alistair Fraser, vice-president; James Cooper, secretary-treasurer; C. Z. Gzowski, C. N. Monsarrat, and J. D. Paterson.

The head office is at 75 Sparks Street, Ottawa, and the executive office at 132 St. James Street, Montreal.

The property held by this company includes a group of claims in the Thunder Bay district about 9 miles south of Kashabowie, known as the Tip Top mine. There is a narrow-gauge light railway from Kashabowie to the mine.

A total of 345 feet of drifting and crosscutting and 50 feet of raising was done during 1929. A shipment of 38.28 tons of ore with a copper content of 6.89 per cent. was made to the Noranda smelter. This ore was obtained from development headings on the 100-, 150-, and 200-foot levels.

A new power-house was installed to replace the one destroyed by fire in April, 1929.

Underground operations were suspended on October 31, 1929. The company employed an average of 6 men underground and 25 men on surface. J. G. Harkness was mine superintendent.

Sudbury Basin Mines, Limited

Operations of the Sudbury Basin Mines, Limited, at the Cheney mine, a copper prospect in Gould township, district of Algoma, were suspended on March 4, 1929. To this date approximately 1,625 feet of drifting and 860 feet of crosscutting had been done on the 150-foot level.

Jos. H. Travers was mine superintendent and employed a force of about 40 men.

White Lake Mines, Limited

The authorized capital of this company is 2,000,000 shares of $1 par value. The officers and directors of the company are: W. A. Lamport, president; J. C. Allan, secretary; W. J. McCallum and D. G. Miller, directors.

The head office is at 301 Royal Bank Building, Toronto.

The property held by this company consists of 10 claims in township 1 A in the Mississagi Forest Reserve, about 45 miles northeast of the town of Iron Bridge.

On February 10, 1929, work was started on the erection of buildings and the transportation of the plant. The plant was put in operation and drilling commenced on May 2, 1929, and work was continuous for the balance of the year.

Underground work consisted of driving two adits under the surface showings and drifting on the vein. The total development footage in adits and drifts for the year was about 2,050 feet.

The mining plant consisted of a 600 cubic foot Sullivan compressor, direct-connected to a 120 h.p. Fairbanks Morse Diesel-type engine, a Sullivan drill-sharpener, and a hand forge.

An average of 31 men was employed, 12 underground and 19 on the surface. O. G. Carstens was in charge of operations.

COPPER-ZINC-LEAD

Treadwell Yukon Company, Limited

The officers of this company are: F. W. Bradley, president; C. D. O'Sullivan, first vice-president; C. A. Norris, second vice-president; F. A. Hammersmith, secretary-treasurer; W. D. Miracle, assistant secretary-treasurer; V. R. Prather, assistant secretary.

The directors are: F. W. Bradley, C. A. Norris, F. A. Hammersmith, C. D. O'Sullivan. and J. W. Crosby.

Operations at the Errington mine, situated in the Sudbury Basin area, were continuous throughout 1929.

Development work consisted of 10,068 feet of drifts and crosscuts, 2,690 feet of raises, and 16,937 feet of diamond-drilling.

Ore hoisted totalled 89,221 tons, of which 27,705 tons was from the 300-foot level and 61,516 tons from the 500-foot level. The total amount of rock hoisted was 40,506 tons.

The average number of men employed during 1929 was 244, of whom 155 were underground workers.

Joseph Errington is manager, and V. C. Clauson is general superintendent.

The following information is extracted from the company's annual report:—

Surface Improvements

There were no material additions made to plant or equipment during the year. The Canadian Pacific Railway built a six mile branch line from Chelmsford, a station on their main line, to and across the property. From this branch line a spur track was built to the mill by the Treadwell Yukon Company. All inbound and outbound freight is now handled by direct railroad service. The branch line and spur tracks will enable connections to be made between No. 1, No. 2, and No. 3 shafts with the mill and thus take the place of the electric railroad system mentioned in last year's annual report.

Mill

The mill operated continuously throughout the year. Additional flotation cells were added, bringing the total up to 74. Progress made in treating the ore has increased the recovery of zinc to 80 per cent., of copper to 70 per cent., of lead to 60 per cent., and of gold and silver to 50 per cent. each. Additional recoveries can and will be made by regrinding and retreating certain middling products that now go to waste; but the amount of additional recovery to be made can be determined only by actual results from large-scale milling such as we have been conducting to achieve the present overall recovery of 73 per cent. of the assay value. The mill, in addition to its demonstration of recoveries, has also proved the value of ore taken out of the mine in cutting out and preparing stopes for large scale mining.

There was milled during the year 89,221 tons of ore, having an average assay of 0.028 ounces gold, 1.64 ounces silver, 1.04 per cent. copper, 0.986 per cent. lead, and 4.49 per cent. zinc. A statement of concentrates produced, and concentrates shipped, together with the amount on hand at the end of the year, is as follows:—

	Tons	Assay content				
		Gold	Silver	Copper	Lead	Zinc
		ounces	ounces	per cent.	per cent.	per cent.
COPPER CONCENTRATE:						
On hand Jan. 1, 1929	26.72	0.170	9.82	13.92	5.36	5.78
Produced in 1929	3,312.46	.208	11.49	14.89	4.46	5.50
Total	3,339.18	.207	11.48	14.88	4.47	5.50
Shipped in 1929	3,314.01	.262	12.11	15.21	4.41	5.46
On hand Dec. 31, 1929	25.17	.210	11.01	15.22	4.43	5.49
LEAD CONCENTRATE:						
On hand Jan. 1, 1929	25.50	0.300	16.85	2.19	32.11	5.65
Produced in 1929	751.73	.300	19.44	3.07	34.00	5.75
Total	777.23	.300	19.36	3.04	33.94	5.58
Shipped in 1929	777.23	.318	19.98	3.17	32.64	5.62
On hand Dec. 31, 1929	None					
ZINC CONCENTRATE:						
On hand Jan. 1, 1929	2,452.43	0.040	2.92	1.26	1.06	45.27
Produced in 1929	5,648.22	.037	2.90	.78	1.27	45.48
Total	8,100.65	.038	2.90	.93	1.21	45.42
Shipped in 1929	7,448.65	.032	2.87	.77	1.02	45.01
On hand Dec. 31, 1929	652.00	.025	1.83	.67	.85	45.00

The net receipts from all concentrates sold during the year, which included concentrates produced during 1928, were $213,487.93, which amount has been applied against development costs.

In addition to zinc, copper, and lead concentrates, an iron pyrite concentrate is now being produced, which has an estimated value of $1 per ton of ore for sulphur content alone. This iron pyrite concentrate is now being stored on the ground while negotiations for its sale are under way. Copper concentrates are being shipped to Laurel Hill, Long Island, lead concentrates to East Helena, Montana, and zinc concentrates to European zinc plants via Montreal during the season of open navigation on the St. Lawrence river. The concentrates being produced are free from smelter penalties for objectionable contents, but under the smelter schedules now in force there is no payment for gold, silver, lead, and copper in the zinc concentrates; no payment for the lead and zinc in the copper concentrates; and no payment for the zinc in the lead concentrates. The loss of these overlaps, and much of the accumulative freight charges on all three classes of concentrates can be saved by local treatment. In this connection, F. M. Smith, metallurgist for the company, has made an extensive study of our metallurgical problems and has submitted a report covering his studies.

Mine

No. 1 Shaft Area.—No exploratory work or preparatory mining was done on this area on either the 300- or 500-foot level. The No. 512 drift, 500-foot level, was advanced easterly to connect with a westerly heading from No. 2 shaft area, to give a connection between shafts on the 500-foot level for safety, for ore haulage, and to conform with legal requirements.

No. 2 Shaft Area.—Work on the Christie, Rheaume, and the North vein constituted the important work done in the mine during the year. This work was all confined to the 500-foot level, and the results have been satisfactory. At present the westerly faces are in waste, but the easterly faces are in ore.

From the westerly limit to the easterly faces is 1,640 feet, and in this lateral extent there has been developed in three of the four veins so far found in this area eight ore bodies having a total length of 2,030 feet, with an average width of 36 feet, or a total horizontal cross-section of 73,000 square feet of commercial ore. There is a large area of known veins yet to be explored on this level, but without taking any further possibilities into account the stoping work for milling ore has proven the occurrence of 7,300 tons of ore per vertical foot.

No. 3 Shaft Area.—All work in this area was discontinued. The rapid development of ore in the No. 2 shaft area made it unnecessary to continue the expense of the separate organization and camp required for No. 3 shaft work.

Summary.—In the three shaft areas the development and preparatory mining work consisted of 7,735 feet of drifts, 2,333 feet of crosscuts, 2,690 feet of raises, 2,431 feet of prospect drill-holes, and 14,506 feet of diamond-drilling.

Future Development Work

The sinking of No. 2 shaft is now in progress and will continue until the 1,500-foot level has been reached. Stations are being cut at 250-foot intervals below the 500-foot level, so intermediate levels can be driven as necessary. When the 1,500-foot level has been reached a crosscut will be driven northerly to reach the four veins that have been explored by the 500-foot level of No. 2 shaft. If the stopeable areas on the 1,500-foot level are of the same size as so far developed on the 500-foot level, then there would be indicated a 15-year life at the rate of 2,000 tons per day from one small portion of the mine.

Assay Values, Estimated Operating Costs, and Profits

The average assay of all ore bodies developed to date is: gold, 0.03 ounces; silver, 1.65 ounces; copper, 1.05 per cent.; lead, 1 per cent.; and zinc, 4.55 per cent.

On an operating basis of 2,000 tons per day and treating the resulting zinc, copper, and lead concentrates at the mine, there should result an operating profit of $2.20 per ton. This estimate is based on copper at 15 cents, lead and zinc at 5½ cents, and figuring $1.00 per ton of ore for the sulphur content of the iron pyrite concentrate.

GOLD

Ankerite Gold Mines, Limited

This company is capitalized at $2,000,000, divided into shares of $1 par value each, of which $1,500,000 has been issued. Together with these shares there is a bond issue of $500,000. The company owns three claims in the township of Deloro, district of Cochrane, known as M.E. 60, 61, and 62.

Early in 1926, the Ankerite Gold Mines, Limited, was formed to acquire the assets of the North American Gold Corporation. In the new company the Porcupine Goldfields Development and Finance Company, Limited, holds an 86⅓ per cent. interest, and the balance belongs to the North American Gold Corporation.

The officers of the Ankerite Gold Mines, Limited, are as follows: F. C. Baker, president; J. P. Ronaghan, secretary; F. Marsic, treasurer, all of New York. Additional directors are: C. E. C. Smith, National Club, Toronto, and W. S. Walton, Royal Bank Building, Toronto. The head office address is 233 Broadway, New York.

W. H. Seamon is manager at the property. During the year 1928 the following development work was completed: drifting and crosscutting, 1,436 feet; raising and winzing, 178 feet. Total development on the property to January 1, 1929, is as follows: sinking, 1,302 feet; drifting and crosscutting, 12,696 feet; raising and winzing, 986 feet.

During 1928, some 66,606 tons of ore was milled with a bullion production of $289,960. During the year the average number of men employed was 101, distributed as follows: mill, 12; surface, 19; mine, 70. Work was curtailed in the summer of 1929, and ceased on September 30.

Baldwin Kirkland Gold Mines, Limited

Baldwin Kirkland Gold Mines, Limited, has a capital of 5,000,000 shares of $1 par value. Wm. Schumacher is president, and S. Christopherson and Leon Ulman are directors. Operations were started in March, 1929, and continued until November, 1929, with a force of 14 men. S. L. Macdonald was manager.

The total amount of drifting and crosscutting done was as follows:—

Level	Feet
100-foot	200
200-foot	1,500
300-foot	900
400-foot	160

The property is situated in the township of Teck, district of Timiskaming, and the head office is at 690 Danforth Avenue, Toronto.

Barry-Hollinger Gold Mines, Limited

Barry-Hollinger Gold Mines, Limited, operated their property at Boston Creek, Pacaud township, district of Timiskaming, during 1929 with a force of 65 men. The capital is 4,000,000 shares, of $1 par value. H. C. Crow is president; R. Fennell is secretary-treasurer; Dr. E. H. Greene, James A. Dunn, and P. A. Barry are directors. James Houston is manager.

The manager's report for the year 1929 is as follows:—

Development

During the year, the three-compartment shaft was sunk 356 feet with stations cut at 1,375-, 1,500-, and 1,625-foot horizons. No. 7 vein was opened up on the 1,375- and 1,500-foot levels, and a crosscut is at present being driven on the 1,625-foot level to pick up the downward extension of No. 7 vein ore shoot.

500-foot Level.—A development drift was put out to prospect the west and northwest sections of the property. Altogether 1,021.5 feet of crosscutting and drifting was completed. In this work a body of red porphyry was intercepted. Where encountered, this dike was 27 feet wide with a northwesterly strike and with a dip of 70 degrees to the southwest. A small tongue from this porphyry paralleled the vein for about 100 feet, but no ore was located along the contact. This is the first body of porphyry so far encountered in our underground work and may have some genetic relation to the ore which lies farther to the east.

A crosscut was driven north which encountered No. 1 vein; 178 feet of drifting was completed on this vein. While values were encountered in sections along this drift, they were not consistent enough to make mill-grade ore. However, this vein shows a very strong shearing and may possibly make ore at another horizon.

750-foot Level.—A short crosscut was driven on this level which located a 50-foot shoot of ore. A stope was opened up on this shoot which produced 2,800 tons of ore.

1,000-foot Level.—In 1,007A stope, work was resumed and ore located in the hanging wall. This stope was mined through to the level above and produced approximately 4,000 tons of ore.

1,125-foot Level.—A raise was put up 35 feet in faulted ground and ore located. This stope (No. 1,107) was mined through to the 1,000-foot level and produced 3,100 tons of ore.

1,250-foot Level.—A stope was opened up on this level and a raise completed through to the 1,125-foot level. Over 2,400 tons was sent to the mill from this stope with approximately 700 tons of broken ore remaining in the stope. This stope is not completed, and work will be resumed at a later date.

1,375-foot Level.—Approximately 450 feet of drifting was completed on No. 7 vein on this level during the year and two shoots of ore located, one 50 feet long and the other 80 feet long. As work in the No. 1,507 stope below progresses, it becomes more evident that this 80-foot shoot will lengthen to the east as the ore goes into the hanging wall of the drift to the east on the 1,375-foot level. Mining of No. 1,307 stope will start at once, and a raise will be put through the ore to the level above. Some very good grade ore was encountered in opening up this stope.

1,500-foot Level.—Ore was opened up for a distance of 180 feet on this level with ore widths averaging from 6 to 20 feet. To date 7,150 tons of ore has been broken in this development; 3,070 tons of this ore still remains in the stope. Approximately 18,000 tons of ore remains unbroken between the back of the stope and the 1,375-foot level. This ore shoot is the most important so far developed on the property both as to length, width, and grade of ore.

To the west of this ore shoot we expect to locate the downward extension of the ore in No. 1,307A stope. We expect to start crosscutting to this ore about the middle of February.

Summary of Underground Operations.—During the year ending December 31, 1929, the following development work was done:—

	Feet
Drifting and crosscutting	2,502.5
Raising	509.5
Sinking	356
	Cubic feet
Station work	10,532

Some 22,350 tons of ore was hoisted, of which 20,800 tons was taken from the stopes, the balance being taken from the development drifts.

Mill

During the first five months of the year the mill averaged from 45 to 50 tons per day. This was gradually stepped up to a tonnage of 90 to 100 tons per day for the last three months of the year. The following is a summary of mill returns based on the Government quarterly returns for the year:—

	Production	Dry tons milled	Recovery per ton milled
January, February, March	$21,835.11	4,223	$5.17
April, May, June	27,102.15	4,652	5.83
July, August, September	40,363.95	5,717	7.06
October, November, December	62,310.41	7,751	8.04

Production

Total bullion produced for the year 1929 amounted to $151,611.62 from 22,343 dry tons milled, making an average recovery of $6.79 per ton. This compares with a recovery of $111,767.21 for the year 1928 from 23,060 dry tons milled, an average recovery of $4.85 per ton.

The increase in production over the previous year of 35 per cent. was due entirely to better grade ore drawn from the 1,500-foot level.

Future Development

During the coming year we expect to be in a position to complete the sinking of the three-compartment winze to the 2,000-foot level, with stations at 1,750-, 1,875-, and 2,000-foot levels.

We plan on keeping one machine entirely on exploratory work, and in the near future this machine will start on the 500-foot level to check up the western extensions of Nos. 8 and 9 veins and to explore the continuation of the porphyry dike located in No. 502 drift and its relation to veins Nos. 8 and 9.

This is a most promising section of ground and can be opened up at small cost by backfilling one of the old stopes on the 500-foot level instead of hoisting the development rock to surface. At a later date we plan to crosscut to No. 1 vein on the 1,000-foot level.

Ore Reserves

No accurate estimate of ore reserves can be made as both Nos. 1,307 and 1,507 raises have not been completed to the level above. On November 1, we roughly estimated 18,000 tons of broken and unbroken ore in the mine above the 1,500-foot level. Since that time we have drawn off 5,400 tons of ore, yet we are reasonably assured at the present time of developing at least 18,000 tons with the possibility of a still greater tonnage. This is due to opening up of wider ore in No. 1,507 stope than we originally figured.

Bathurst Mines, Limited

The authorized capital of this company is 4,000,000 shares of no par value, of which 2,225,006 were issued at the end of 1927. Of these shares, 950,000 were held by T. H. Bathurst, Limited, and 500,000 by the Price-Logan Gold Mines, Limited.

The officers of the company are: T. W. Bathurst, president; E. P. Gleeson, vice-president. T. H. Rea, R. H. New, and Dr. F. Quin are directors. The head office is at 51 Sparks Street, Ottawa, and the mine office address is Narrow Lake, Ont.

The company's holdings include 30 claims of the Price-Logan, Daimpre, Bathurst, and Colburn groups, located about Car and Bathurst lakes, Skinner township, district of Kenora (Patricia portion).

The following buildings have been constructed of logs: two sleep camps, 20 by 20 feet; cookery, 36 by 36 feet; office, 24 by 18 feet; power-house, 40 by 37 feet; dry-house, 18 by 12 feet; blacksmith shop, 18 by 12 feet; residence, 18 by 12 feet; headframe, 43 feet in height; and staff-house, 16 by 16 feet.

The following plant was installed and placed in operation during the year: two 60 h.p. locomotive-type boilers; one Canadian Ingersoll-Rand air compressor, straight-line type FR-2, with a capacity of 528 cubic feet per minute; one Canadian Ingersoll-Rand hoist, 7 by 6 inches, type SSR. This hoist was replaced by an 11- by 8-inch of the same type in the new year.

The blacksmith shop is equipped with a Rand sharpener and furnace.

During the year the shaft was sunk 225 feet and one level broken off at the 200-foot horizon. When inspected in July, 1929, drifting on this level amounted to 1,741 feet, with 1,291 feet of crosscutting.

On June 15, 1929, a small mill was placed in operation from which $2,500 had been recovered, being production from a rich pocket on the surface and some underground ore. Mill equipment and practice is as follows: A 9- by 7-inch jaw crusher feeds direct to two steam stamps discharging to two copper plates, 7 by 3 feet, which overflow to a canvas table, 8 by 12 feet, where some fine gold and concentrates are caught.

When inspected, operations had been curtailed somewhat, and only 12 men were employed on the property. Frank Carnegie is manager.

Beardmore Gold Mines, Limited

The authorized capitalization is 5,000,000 shares of $1 par value.

The officers and directors are: Charles D. Bertram, president; F. C. Sutherland, vice-president and general manager; Joseph Montgomery, secretary-treasurer; J. P. Leask and Charles Thompson, directors.

The head office is at 207 Metropolitan Life Building, Toronto.

The property consists of 32 claims on the north shore of Lake Superior in the Nipigon Forest Reserve, about 132 miles northeast of Port Arthur and a mile and a half distant from the town of Beardmore on the Canadian National railway.

Operations were carried on continuously during 1929, and the development footages were as follows: drifts, 150 feet; crosscuts, 200 feet; shaft-sinking, 100 feet.

A prospectus issued March, 1930, includes a report by P. H. Crawshaw, which says in part:—

> The main development at the mine to date has been the sinking of No. 2 shaft to a depth of over 200 feet, with stations and workings cut at both the 100- and 200-foot levels. This shaft has been efficiently timbered to the lower levels and is at present being served by a small steam hoist operating a bucket only.
>
> The ore bodies consist of mineralized quartz veins in carbonate rock, heavily mineralized in places with arsenopyrite and the sulphides of iron, with which the gold values are mainly, if not wholly, associated. At the 100-foot level, 61 feet of drifting and crosscutting has been accomplished, and channel sampling across the vein at this level has given an average value of $22.30 over drift widths. On the 200-foot level lateral work consists of 220 feet of crosscutting to the south, 71 feet of drifting on the vein to the west, and 33 feet of drifting on the vein to the east. The crosscut to the south has disclosed two other veins which with further development may prove good sources of ore of commercial grade, a roof sample across 6 feet on the No. 2

> vein assaying $11.40. Channel sampling on the 200-foot level on the No. 1 vein proved very erratic, with values running between a few cents and $116, and with selected high grade samples assaying an average of $444. Owing to the irregular fracturing and deposition of the sulphides channel sampling does not give a true indication of average values, and bulk sampling should be resorted to in lots of 5 to 10 tons, when I feel that I shall be quite safe in stating that average values across the vein material now exposed would exceed $30 per ton, as, in places, the vein is extremely rich with values running into some hundreds of dollars.

The average number of men employed during the year was: underground, 5; on the surface, 6.

W. A. Roberts was in charge of the property.

Bobjo Mines, Limited

This company is capitalized at $5,000,000, in shares of $1 par; 2,948,005 shares have been issued.

The officers of the company are: R. J. Josey, president; L. K. Fletcher, L. Erenhous, F. D. Reid, and J. Parker, directors. The head office of the company is at 372 Bay Street, Toronto. The mine office address is, c/o Western Canada Airways, Limited, Sioux Lookout.

The property consists of 43 claims in Dent township, East Clearwater lake section of Kenora district (Patricia portion), and was formerly part of the Laidley claims optioned to the Coniagas Mines, Limited.

The following notes on the property are taken from the report of E. L. Bruce on the Gold Deposits of Woman, Narrow and Confederation Lakes:[1]—

> The largest deposit of quartz yet opened up occurs west of the porphyry dike on Claim K R.L. 6,631. It consists of an irregular mass, with its greater length north and south. From the eastern margin a large number of small quartz veins, ranging from stringers to veins two or three inches wide, curve away to the east towards the porphyry dike, which, at the north end of the quartz dome, is 60 feet distant from it.
>
> The wall rock is greenstone, part of which is spherulitic. Northwest of the quartz mass a small regular quartz vein strikes slightly west of north, cutting diorite. A small lamprophyric dike cuts through it without displacing it.
>
> The quartz is a white to bluish variety in which pyrite is sparingly disseminated. Native gold has been recognized at several places. Microscopic examination shows that the quartz has been fractured and cemented by later quartz, which forms a fine-grained mosaic around the fragments.

In the above-mentioned area a high-grade pocket was found on surface. The company then diamond-drilled the area with a view to picking up the formation and determining a shaft site.

A complete mining plant was taken to the property early in 1929. This plant consists of two 70 h.p. boilers, one Canadian Ingersoll-Rand PRL compressor, 14 by 9 by 12 inches, 600 cubic feet per minute capacity, a Walker Bros. double-drum hoist, capable of sinking 500 feet, and a small generator for camp lighting. The blacksmith shop is equipped with a steel sharpener. Camp buildings for the accommodation of forty men have been erected.

At the time of inspection in July, 1929, a two-compartment shaft had been sunk 270 feet, with levels at the 125- and 250-foot horizons, on each of which considerable drifting and crosscutting had been done.

A small mill, consisting of a 3- by $2\frac{1}{2}$-foot ball mill of the clean-up barrel type and a 6- by 8-inch jaw crusher driven by a small steam engine is in operation on the property. This is treating high-grade ore from the surface pocket. The bullion is recovered in the assay plant just recently put up.

When the property was inspected, 28 men were employed. G. A. Howes is superintendent.

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[1] Ont. Dept. Mines, Vol. XXXVII, pt. 4, 1928, p. 46.

British Canadian Mines, Limited

This company has an authorized capital of 3,000,000 shares of $1 par value.

The officers and directors are: J. M. Aitken, president; F. McQueen, secretary-treasurer; W. W. Canham, A. G. Halstead, E. P. Barry, and H. F. Coombs, directors.

The head office of the company is at 8 Bloor Street East, Toronto.

British Canadian Mines, Limited, are the owners and operators of the Foley gold mine at Shoal lake, Rainy River district. The company owns outright 778 acres and has a controlling interest in 249 acres.

During 1929, operations at the Foley were very curtailed, owing to lack of finances, and the total underground work consisted of completing a winze from the 200-foot level to connect with a raise previously driven some 160 feet from the 420-foot level. This gives a vertical shaft from the 850-foot level to the 200-foot level, and the intention is to complete this shaft through to surface.

New pumps were installed underground to handle mine water, and also at the lake to supply the mill and power plant. A new 12,000-gallon steel tank was installed in the mill for the purpose of supplying mill requirements.

The financial statement issued by the company as at July 31, 1929, is as follows:—

ASSETS

CURRENT ASSETS:		
Cash on hand and in bank	$28,786.89	
Accounts receivable	2,973.40	
Inventory of supplies, machinery parts, and explosives	2,020.73	
		$33,781.02
DONATED STOCK, HELD IN TRUST:		
200,000 shares of capital stock of British Canadian Mines (no personal liability) at 50 cents per share		100,000.00
PROPERTIES, PLANT, DEVELOPMENT:		
Mining properties at book values	$1,180,250.00	
Buildings, machinery, and equipment	250,013.16	
Direct development	400,232.39	
Exploration and preliminary work	34,351.16	
General expense, including administration at the mine	253,257.27	
Head office expense	49,070.81	
		2,167,174.79
INTEREST ON BONDS		9,479.66
INCORPORATION AND PRELIMINARY EXPENSES		6,891.36
DISCOUNT ON CAPITAL STOCK SOLD		895,859.00
COMMISSION ON BONDS SOLD		35,195.00
		$3,248,381.01

LIABILITIES

CURRENT LIABILITIES:		
Accounts payable	$1,177.01	
Wages payable	426.50	
Bills payable, "bank"	25,000.00	
		$26,603.51
BOND INTEREST accrued to 31st July, 1929		9,076.60
BRITISH CANADIAN SECURITIES, LTD.		18,951.01
RESERVE FOR DEVELOPMENT		100.000.00
BOND ACCOUNT:		
Authorized $500,000.00; issued and advance payments	$174,754.89	
Less unpaid thereon	1,240.00	
		173,514.89
CAPITAL STOCK:		
Authorized 3,000,000 shares of $1 each; issued and paid up		2,920,235.00
		$3,248,381.01

Buckingham Mines, Limited

This company owns a group of claims in Asquith and Fawcett townships in the West Shiningtree area, district of Sudbury.

The officers are: James E. Day, president; and F. L. King, secretary. The directors are: J. E. Day, T. J. Day, H. Monford Smith, Israel Singer, and John McMurren.

The mine has not been worked since September, 1929, and the company is endeavouring to refinance.

The head office is at 116 Federal Building, Toronto.

Canadian Champion Reef Mining Company, Limited

This company is capitalized at 5,000,000 shares of $1 par value.

The officers and directors are: D. W. Lang, president; W. D. McKay, vice-president; K. G. Robertson, secretary; G. W. Adams and F. W. Bennett, directors. The head office is at 1302 Canada Permanent Building, Toronto.

This company holds 183 acres in the West Shiningtree area, district of Sudbury, including what is known as the West Tree mine.

During 1924 and 1925, 3,390 feet of diamond-drilling was done and a shaft sunk to a depth of 92 feet. A total of 178 feet of drifting was done on the 92-foot level.

In 1928, an option was given D. W. Lang to purchase the balance of the treasury stock. In the fall of 1929, Mr. Lang gave a suboption to F. W. Bennett, in behalf of, it is understood, the Bennett-Pacaud Mining Company, Limited.

The monies that were received from time to time from Mr. Lang in exercising his option were used for development purposes at the mine, and during 1928 and 1929 the shaft was sunk to a depth of 520 feet and stations were cut at the 100-, 250-, 375-, and 500-foot levels. A total of 650 feet of drifting and 210 feet of crosscutting was accomplished.

Operations in 1929 were confined to the last three months of the year, with J. M. C. Dunlop in charge. An average of 30 men was employed.

Work was suspended on April 15, 1930.

Central Patricia Mines, Limited

This company is capitalized at $4,000,000, divided into 4,000,000 shares of $1 par value.

The officers of the company are: F. M. Connell, president; K. A. MacPhadyen, secretary-treasurer; Alan Cockeram, assistant secretary-treasurer. J. H. C. Waite, Louis Cohen, and W. H. Connell are directors. The head office of the company is at 1610 Canada Permanent Building, 320 Bay Street, Toronto.

The property is in the Pickle Lake–Crow River area, district of Kenora (Patricia portion), about 100 miles north of Savant Lake station on the Canadian National railway. The summer and winter routes to the property are about the same, approximately 125 miles from Savant Lake station, through Savant lake, across McCrea lake, through Lake St. Joseph past Osnaburgh House, through Doghole lake, Little Ochig and Big Ochig lakes, and Pickle lake. There are about 25 miles of portages on this route. A good flying service is maintained to this area by the Western Canada Airways, Limited, with base at Allanwater.

The property consists of some 18 claims, staked during the summer of 1928. Surface work started in the winter of that year, when camps to accommodate 40 men were erected. Early in 1929 a surface diamond-drilling campaign was started which totalled 6,881 feet. In the fall of the year a three-compartment shaft was sunk 35 feet by hand.

The following steam plant was hauled to the property early in 1930 and erected: two 110-h.p. return tubular boilers, a 934-foot cross-compound C.I.R. compressor, and a 12- by 15-inch single-drum Flory hoist, together with the requisite other plant, and supplies necessary for twelve months operation.

During the year approximately 30 men were employed on the property. A. J. Keast is mine manager.

In a paper prepared for the Canadian Mining Institute meeting, M. E. Hurst, of the Ontario Department of Mines, says of the Central Patricia gold property:—

> The principal deposit on this property consists of a network of quartz veins and associated sulphides which occupy a zone of fracturing intersecting lenses of iron formation. The ore zone strikes east-west and dips steeply to the north. A short distance to the north, a sheet-like body of altered quartz porphyry or quartz-sericite schist runs parallel to the ore zone. It has been suggested that this represents a later intrusion and is responsible for the mineralization, but evidence obtained so far is insufficient to warrant such an assumption.

Coniaurum Mines, Limited

This company has an authorized capitalization of 6,000,000 shares of no par value. The mine is in the township of Tisdale, district of Cochrane, and adjoins the property of the McIntyre-Porcupine Mines on its east boundary.

The officers and directors of the new company organized under Ventures, Limited, are as follows: Thayer Lindsley, president; A. L. Bishop, vice-president; H. Whittingham, secretary; J. Gordon Hardy, D. M. Hogarth, Alex. Longwell, and T. H. Rea, directors. The head office is at 100 Adelaide Street West, Toronto.

Under the arrangements made with the shareholders and bondholders of the old Coniaurum company, bondholders are to receive 1,200,000 shares in the new company on the basis of 1½ shares for each $1 of bonds held. Common shareholders in the old company are to receive 600,000 shares in the new company in the ratio of one new share for each two old shares held. Ventures, Limited, after the former bondholders and shareholders had been provided for, contracted for or took option on the balance of the authorized shares, approximately 4,260,000, at an advanced scale of prices, which will place altogether $2,500,000 cash in the treasury, should development warrant the taking up of all the options.

The following is the balance sheet from July 4, 1929, the date of incorporation of the new company, to December 31, 1929:—

ASSETS

Cash in banks and on hand		$191,864.31	
Bullion settlement outstanding		60,272.03	
Accounts and interest receivable		1,073.55	
Balance of funds on deposit with Toronto General Trusts Corporation for redemption of 7% first mortgage bonds of Coniaurum Mines, Limited (no personal liability)	$14,740.05		
Less: Bonds outstanding and accrued interest	10,700.00		
		4,040.05	
		$257,249.94	
Inventory of supplies		36,767.72	
			$294,017.66
Mining properties		$2,200,084.14	
Buildings, machinery, and equipment		759,238.23	
			2,959,322.37

ASSETS—*Continued*

Mine development expenditures by predecessor company	$1,162,197.27		
Less: Written off at $1 per ton	39,000.00		
		$1,123,197.27	
Prepaid insurance		2,342.51	
Organization expense		5,628.83	
			1,131,168.61
			$4,384,508.64

LIABILITIES

Accounts and wages payable		$43,701.87
Capital stock (authorized 6,000,000 shares, no par value):		
Issued and to be issued, 2,512,207 shares (under option, 3,325,000 shares)	$4,354,731.99	
Less: Deficit (subject to depreciation on buildings, plant, and equipment)	13,925.22	
		4,340,806.77
		$4,384,508.64

The following is an extract from the report of the board to the shareholders:—

Operations at the property since the new company took it over on August 20, 1929, and until the end of that year, showed a working profit of $25,074.78, before write-offs. Resources in hand at the latter date, less liabilities, totalled $252,658.30.

Development under the auspices of the new company had not yet received much fresh impulse up to the end of the year, time being required by this company's engineers to study the problems involved. This has now been done and the first steps taken towards sinking to greater depth through a winze starting from the 2,000-foot level. Delays in getting deliveries of the electrical equipment required will militate against prompt execution of this work.

The mine manager, John Redington, makes the following statement regarding the work at the mine:—

Reviewing operations during the year 1929, I would say that development was curtailed considerably owing to the special conditions experienced throughout the year. No new ore bodies were encountered, but the known ore was more fully developed by a number of sublevels and raises, as well as by extension of the main levels.

A summary of this development accomplished during the year shows:

	Feet
Drifting	2,600
Crosscutting	473
Raising	371
Diamond-drilling	79

Of the above footage 2,082 feet was in ore with an average value of $6.66 across a width of 4.2 feet. Veins Nos. 2, 7, 12, 14, and 15 were attacked on the 500-, 850-, 1,150-, 1,375-, 1,500-, 1,625-, 1,750-, and 2,000-foot levels, and by careful mining and sorting we have been able to mine the narrow widths at a small margin of profit.

The mill treated 103,293 tons of ore with an average recovery of $6.453, or 96.6 per cent. of the gold content, and operated 88.7 per cent. of the possible running time.

Stoping and ore extraction for the year showed a total of 141,769 tons broken with 91,574 tons trammed to mill. Ore reserves at the end of the year showed 70,412 tons of broken ore in the stopes, of approximately present milling grade. An accurate estimate of the value of ore in place cannot be made until further work is accomplished.

Cooper Gold Mines, Limited

The authorized capital of this company is 3,000,000 shares of $1 par value. The Pioneer Mining Corporation owns a controlling interest in the company.

The property consists of the Cooper and Minto blocks, containing 24 claims, in the Michipicoten area, four miles from Wawa on the Algoma Central railway.

Underground operations during 1929 were confined to the Jubilee vein.

Development footage for the year ending March 1, 1930, is as follows:—

Level	Station-cutting	Drifting	Crosscutting	Raising	Winzing
	cu. ft.	feet	feet	feet	feet
2nd	....	737	521	....	....
3rd	....	708	549	46	....
4th	....	332	889	94	123
5th	1,776	626	745	43	....
Totals	1,776	2,403	2,704	183	123

A 20-ton test mill was finished and put in operation at the end of February, 1929; up to March 1, 1930, it had milled 2,462 tons. Underground operations were suspended March 29, 1930, and later, the pumps were taken out and the mine allowed to flood.

John Knox, Jr., was manager of the property.

De Santis Gold Mining Company, Limited

The De Santis Development Company, Limited, was incorporated on December 28, 1926. Its authorized capital was $40,000, divided into 400 units of $100 par value each. An option agreement was reached between the De Santis Development Company, Limited, P. De Santis, and G. Romualdi, who were the original stakers of the claims in Turnbull township, Kamiskotia gold area.

Prior to the De Santis Development Company, Limited, taking over the De Santis claims, P. De Santis, in 1923, brought out 600 pounds of picked ore by dog team, which was forwarded to the Government Testing Laboratory in Cobalt and gave a return of $240 to the ton. Later on, in the winter of 1924, he also brought out 5,500 pounds of picked ore, which was treated at the same laboratory and gave a return of $140 to the ton. By operating a small hand stamp-mill, 13 ounces of gold was recovered.

In May, 1928, the company was reincorporated under the name of "The De Santis Gold Mining Company, Limited" (no personal liability), with an authorized capital of $4,000,000, at a par value of $1 per share. The new company agreed to take over all the assets of the De Santis Development Company, Limited, and took up the option agreement with P. De Santis and G. Romualdi. The terms were as follows: "P. De Santis, G. Romualdi, and the De Santis Development Company, Limited, to receive 2,100,000 shares of the new issue, which give the De Santis Gold Mining Company, Limited (no personal liability), an absolute title to 8 patented claims and 4 unpatented claims." The balance of 1,900,000 shares to remain in the treasury.

In July, 1928, there was a block of 50,000 shares offered in preference to the original stockholders, which was all absorbed in the limited time allowed.

The intention of the company at present is to issue another block of 200,000 shares, at 50 cents per share, to enable the directors to continue further development of the property by sinking the shaft to a greater depth and extending present lateral works.

The officers and directors of the company are as follows: Peter De Santis, president; Biagio Ferreri, vice-president; Giuseppe Giustini, secretary-treasurer; Luigi De Luca, Luigi D'Alessendri, Giacobbe Torlone, Ettore Marinacci, F. Prest, A. Fresco, Dominico Colomeco, directors.

The property consists of 8 patented and 4 unpatented claims, situated near the southwest corner of Turnbull township. The shaft and camp buildings are on claim No. 8,722.

Early in 1929 an option was taken on an additional 17 claims, adjoining the original group to the east. It is intended to do surface work on these claims during the summer of 1929.

The plant consists of two vertical boilers, 12 and 15 h.p.; one Canadian Ingersoll-Rand compressor, straight-line type, capacity 110 cubic feet per minute; and one 6- by 8-inch Jenckes hoist. The buildings are all of log construction and include a power-house, 20 by 40 feet; a cookery, 20 by 30 feet; sleeping camp, 20 by 30 feet; storehouse, 18 by 24 feet; and a two-storey office, 20 by 24 feet.

A shaft has been sunk to a depth of 150 feet, and 1,000 feet of drifting and crosscutting was done at the 125-foot level.

The vein is exposed in the shaft for a distance of 50 feet. The shaft is vertical, 5 by 9 feet, and 150 feet deep. The vein strikes north and dips steeply to the west. It is nearly vertical for several feet from surface, then dips out at an angle which brings it 30 feet west of the shaft at the 125-foot level. Where exposed in the north wall of the shaft, the quartz vein is 5 feet wide. In most places the quartz where seen is much narrower than this.

When development was in progress, the company employed 14 men. Peter De Santis is manager.

Dome Mines, Limited

The authorized capital stock of Dome Mines, Limited, consists of 1,000,000 shares of no nominal or par value, of which 46,666 are held under an agreement in trust for the company; the dividends on these shares are returned to the treasury of the company. The mine is in the township of Tisdale, district of Cochrane.

The officers of the company are: Jules S. Bache, president and treasurer; H. P. De Pencier, first vice-president; G. C. Miller, second vice-president; Morton F. Stern, third vice-president; Alex. Fasken, secretary; E. P. Goetz, assistant treasurer and assistant secretary; C. C. Calvin, assistant secretary; John B. Robinson, assistant secretary.

The directors are: Jules S. Bache, Alex. Fasken, G. C. Miller, Dwight B. Lee, G. H. Harris, Wallace Nesbitt, Innis P. Allen, Morton F. Stern, and R. F. Segsworth.

H. P. De Pencier is the general manager of the company, and J. H. Stovel is general superintendent.

The office of the executive and financial department is at 42 Broadway, New York. The Toronto office is at 36 Toronto Street.

The following statements are taken from the report of the directors to the shareholders:—

ASSETS

CAPITAL:			
Mining claims and properties		$3,486,593.36	
Plant, etc. (less mill destroyed by fire) at depreciated replacement values, as per appraisal, plus additions since		2,174,259.72	$5,660,853.08
CURRENT:			
Cash in banks	$311,192.44		
Call loans	500,000.00		
Bullion en route	98,026.76		
Accounts receivable	3,414.87		
Interest receivable	86,405.25		
Government, railway, and other bonds at cost	3,370,863.96		
Supplies—mining and milling	171,630.79	$4,541,534.07	

ASSETS—*Continued*

DIVIDEND ASSURANCE FUND consisting of:			
Cash in bank	$57,945.55		
Call loans	550,000.00		
Government, railway, and other bonds at cost	2,031,387.50		
		2,639,333.05	
			7,180,867.12
PREPAYMENTS AND DEFERRED CHARGES			12,510.07
			$12,854,230.27

LIABILITIES

CAPITAL AND SURPLUS:			
Capital—authorized 1,000,000 shares of no nominal or par value, all issued for the properties and assets of the old company, the Dome Mines Company, Limited, at $7 per share (of these shares 46,666 are held in trust for the company and all dividends paid thereon are immediately returnable to the company)		$7,000,000.00	
Surplus		3,172,172.03	
			$10,172,172.03
CURRENT:			
Accounts payable		$39,794.44	
Salaries and wages payable		46,457.92	
Accrued income and other taxes		128,703.06	
Dividend payable 20th January, 1930	$250,000.00		
Less: Dividends on the shares held in trust for the company as above	11,666.50		
		238,333.50	
Unclaimed capital repayment and dividends		37,639.45	
			490,928.37
RESERVES:			
Operating equalization		$31,244.48	
Amortization of premium on bonds		15,934.33	
Expenses of cleaning up fire wreckage		45,753.35	
Depreciation plant and equipment, etc.		2,098,197.71	
			2,191,129.87
			$12,854,230.27

The appropriation account for the year 1929 is as follows:—

Reserved for depreciation of buildings, plant, etc.		$15,178.14
Dividends Nos. 46, 47, 48	$715,000.50	
Dividend No. 49 payable 20th January, 1930	238,333.50	
		953,334.00
Surplus 31st December, 1929		3,172,172.03
		$4,140,684.17
Surplus 31st December, 1928	$2,362,605.16	
Less: Bonus to mine management and staff for 1928	15,350.00	
		$2,347,255.16
Profit for year ended 31st December, 1929		1,793,429.01
		$4,140,684.17

The following statements are from the report of the general manager for the year 1929:—

Production was maintained normally until the destruction of the mill by fire on the night of October 28. Since then mining and development has been carried on at a reduced rate to give employment to as many of our married employees as possible, and to hold the staff together. Also a clean-up plant has been installed in the refinery and the work of cleaning up the ruins of the mill proceeded with as far as possible.

During the year 535,600 tons was hoisted; 467,300 tons was ore, of which 452,900 tons was sent to the mill and treated, and 14,400 tons was stored in one of the old open pits. The remainder, 68,300 tons, was waste, which was dumped on the surface.

The 452,900 tons milled yielded bullion worth $3,432,542.99, the average yield per ton being $7.579. For the preceding year the yield per ton was $7.1439.

In addition to the above production, bullion worth $157,646 31 was recovered from the ruins of the mill in November and December.

The following statement gives particulars of revenue and expenditures for the year under review:—

EARNINGS STATEMENT

For the Year ended December 31, 1929

Earnings:		
Amalgamation bullion		$2,460,906.49
Cyanidation bullion		1,129,282.81
		$3,590,189.30
Non-operating revenue		321,170.46
		$3,911,359.76
Operating and Maintenance Expenditure:		
Mining, including hoisting	$665,783.44	
Development	611,829.09	
Crushing and conveying	68,825.00	
Milling	420,192.69	
Bullion expense	23,298.22	
Fire protection	7,207.26	
Warehouse expense	10,828.49	
Auditors' expense	2,655.20	
Administrative expense:		
Mine office	110,301.70	
Executive offices	20,349.31	
Provincial and municipal taxes	58,997.45	
Insurance	28,205.34	
	$2,028,473.19	
Reserve for Dominion of Canada and U.S. income tax	89,457.56	
		$2,117,930.75
Profit for the Year		$1,793,429.01

Mining

The following are particulars of the principal stopes:—

No. 301.—From this stope above the 3rd level 7,704 tons, averaging $5.61 per ton, was drawn and 40,352 tons of broken ore remains to be drawn.

Sixth Level.—From stopes Nos. 505 to 603, 4,673 tons, averaging $4.94 per ton, has been drawn and 72,109 tons of broken ore remains to be drawn. From No. 621 stope in Dome Extension 8,938 tons, averaging $4.93 per ton, has been drawn. The sill has been broken down into No. 715 stope, through which the remainder of the tonnage will be drawn.

Seventh Level.—The main hanging wall area has been drawn empty, yielding 6,496 tons, averaging $5.37 per ton.

No. 715 stope under No. 621 stope in Dome Extension has yielded 9,283 tons, averaging $4.13 per ton, and 20,543 tons of broken ore remains in it to be drawn.

No. 741 stope has yielded 7,023 tons, averaging $7.16 per ton, and 1,138 tons of broken ore remain in it.

Eighth Level.—No. 841 stope in the greenstone yielded 12,068 tons, averaging $5.38 per ton, and 19,341 tons of broken ore remain to be drawn. Stoping has been almost completed in this stope.

Ninth Level.—No. 936 stope in the greenstone yielded 16,157 tons, averaging $8.69 per ton, and 20,308 tons of broken ore remains to be drawn.

Tenth Level.—No. 1,022 stope and the sills above it yielded 67,195 tons, averaging $10.69 per ton. This stope has been drawn empty and preparations made to break the sill down into the 11th level stopes.

The four greenstone stopes on this level, Nos. 1,041, 1,042, 1,044, and 1,054, have yielded 73,532 tons, averaging $6.75 per ton, and 124,711 tons of broken ore remain to be drawn.

Eleventh Level.—The greenstone stopes on this level, Nos. 1,136, 1,140, and 1,141, yielded 20,542 tons, averaging $8.40 per ton, and 87,090 tons of broken ore remains to be drawn.

Twelfth Level.—The hanging-wall areas on this level and the sills above it yielded 43,604 tons averaging $9.98 per ton. Only a small tonnage, 1,854 tons, remains to be drawn here.

The eastern stopes, Nos. 1,308 to 1,232, and the sill of No. 1,130 stope yielded 45,299 tons, averaging $10.07 per ton, and 16,152 tons remains to be drawn.

The greenstone stopes on this level, Nos. 1,235 and 1,236, yielded 26,296 tons, averaging $7.30 per ton, and 39,633 tons of broken ore remains to be drawn.

Thirteenth Level.—At the 13th level, the hanging-wall area has yielded 7,204 tons, averaging $8.12 per ton, and 35,886 tons of broken ore remains to be drawn.

In the greenstone a small stope under No. 1,235 stope has yielded 7,384 tons, averaging $5.02 per ton, and 7,632 tons of broken ore remains to be drawn.

Fifteenth Level.—No. 1,509 stope at the eastern end of the 15th hanging-wall area yielded 10,987 tons, averaging $7.32 per ton. About 8,000 tons of very low grade material remains in this stope; it is badly diluted with slate.

Sixteenth Level.—No. 1,612 stope at the eastern end of this level has yielded 5,104 tons, averaging $5.81 per ton, and is finished.

In the greenstone a new stope has been opened up in the area indicated by diamond-drill hole No. 1,181, described in last year's report. This stope, No. 1,617, has yielded 5,453 tons, averaging $7.32 per ton, and 1,947 tons of broken ore remains to be drawn.

Another stope in the greenstone, No. 1,618, lying 150 feet north of No. 1,617, has yielded 1,912, tons, averaging $7.35 per ton, and 943 tons of broken ore remains in it.

Eighteenth Level.—Stopes Nos. 1,801 to 1,805 yielded 20,968 tons, averaging $7.77 per ton, and 27,625 tons of broken ore remains to be drawn.

Development

The accompanying table gives details of the development accomplished during the year:—

Summary of Development Work for Year 1929

Level	Drifts	Cross-cuts	Drifts and crosscut slashing	Raises	Winzes	Box-holes	Raises, winzes, and boxhole slashing	Total	Diamond drilling
	feet	feet	feet	feet	feet	feet	feet	feet	feet
3rd....	....	....	36	33	....	135	26	230	....
5th....	....	....	5	....	....	....	....	5	151
6th....	....	90	21	....	....	....	....	111	....
7th....	96	188	43	68	5	72	....	472	....
8th....	262	....	55	107	52	45	....	521	....
9th....	219	5	38	76	105	121	3	567	81.5
10th....	372	236	69	221	45	606	52	1,601	140
11th....	465	518	99	59	62	393	7	1,603	1,294
12th....	859	722	193	339	14	616	7	2,750	889
13th....	418	719	86	107	8	538	13	1,889	2,647
14th....	550	995	201	57	148	119	3	2,073	1,398
15th....	343	312	82	....	24	....	....	761	713
16th....	1,596	752	260	554	148	379	30	3,719	1,548.5
17th....	212	263	69	....	16	29	5	594	2,443.5
18th....	780	941	173	255	6	274	23	2,452	2,167
23rd....	1,275	41	2	....	....	....	....	1,318	831
Total.	7,447	5,782	1,432	1,876	633	3.327	169	20,666	14,303.5

Waste hoisted, 68,300 tons.

The greater portion of the development work has been done in the greenstone areas north of the sedimentary basin where approximately 16,777 feet of drifting, crosscutting, raising, winzing, and box-holing has been done in the course of searching for and opening up the various ore shoots.

At the 10th, 11th, 12th, and 13th levels, crosscuts have been advanced northerly into Dome Extension ground for distances of 202, 322, 702, and 744 feet, respectively. These crosscuts penetrate the greenstones, and while narrow zones showing some mineralization and quartz stringers have been located, no important ore body has been found. Some of the quartz stringers show considerable visible gold but are too small to yield any important tonnage of ore.

At the 14th level, No. 1,411 crosscut also has been driven northerly for 967 feet. It penetrates the greenstones above the intersection of ore shown in diamond-drill hole No. 1,181 recorded last year (32 feet averaging $7.43). Crosscut No. 1,411 does not, however, show any ore of this character, only a few scattered assays having been obtained in sampling. A total of 523 feet of drifting has been done in the vicinity and a short ore body of about 85 feet, averaging $5.56 over the width of the drift, has been located; this appears to be the top of another ore body, which extends downward to some point below the 16th level.

At the 16th level, crosscut No. 1,614 from No. 1,603 drift has been driven 629 feet to reach this area, and drifts and crosscuts, totalling 933 feet, have been driven to open this ore body at the 16th level. The work has disclosed an ore zone 440 feet in length, and stoping operations indicate an average width of about 25 feet. The grade of the ore drawn was $7.32. Much of the ore is quite low grade, but patches containing visible gold are encountered, which improve the grade somewhat.

The 16th and 14th levels have been connected by raising and winzing, and this ore body has been developed at the 15th level horizon by 462 feet of drifting and crosscutting. This work has shown an ore body at this horizon of 235 feet in length and 25 feet in width. The grade is better here, the average of the sampling over the width of the drift being $8 for a length of 235 feet.

At the 16th level, No. 1,614 crosscut has been advanced north of the ore body No. 1,617 just described and another ore zone, known as No. 1,618, has been found and opened up by 162 feet of drifting. This ore body is lower in grade than No. 1,617, the drifting done showing 160 feet averaging $2.52. A stope started above this drift is showing better grade ore. Crosscutting at the 15th level has failed to locate any ore corresponding to this shoot.

From a station in No. 1,614 crosscut, 70 feet north of No. 1,618 ore body, three diamond-drill holes have been drilled beneath the 16th level. These show the following intersections:—

Hole No.	Bearing	Dip	Intersection
1,196	S. 1° 29′ W.	41° 03′	From 70 to 87 feet, $2.88 over 17 feet. From 255 to 290 feet, $5.05 over 35 feet.
1,198	S. 41° 23′ W.	43° 51′	From 98 to 124 feet, $4.07 over 26 feet. From 363.5 to 383 feet, $3.75 over 19.5 feet.
1,201	S. 35° 37′ E.	46° 28′	From 62.5 to 81 feet, $6.22 over 18.5 feet. From 252.5 to 283 feet, zone 31.5 feet.

Also a drift has been driven eastwards into the sediments from the east end of the No. 1,617 ore zone, which terminates at the sediments for 496 feet and two diamond-drill holes, totalling 1,011 feet, drilled to explore the sediments farther east. No ore whatever has been found in this drift or the diamond-drill holes.

At the 18th level the area beneath No. 1,617 ore body has been reached by No. 1,809 crosscut, which was advanced 784 feet during 1929. The crosscut failed to locate any ore body, and 768 feet of drifting in the zone has so far disclosed only bunches of ore.

The 16th and 18th levels have been connected in this zone by raising and winzing, and 447 feet of drifting and crosscutting has been done at the 17th level horizon. This work so far, like that at the 18th level, has failed to locate any payable ore body, though short lengths of mineralized ground have been disclosed.

A crosscut at the 23rd level has been advanced 1,275 feet northeasterly through the greenstones towards the possible downward extension of the zones which have contained the ore bodies in the upper levels. This crosscut has penetrated only unfavourable formation so far but will have to be advanced some distance farther yet.

During the year, 14,303.5 feet of diamond-drilling was done. This was almost wholly in connection with the development work in the greenstone area, and while only a few intersections of economic importance have been obtained, this drilling has been of assistance and has given much geological information which is of importance, as the occurrence of these shoots of ore appears to be dependent in some way on the geological structure and conditions.

Of the tonnage milled, the stopes yielded 411,600 tons, averaging $8.1683 per ton, and development work 41,300 tons, averaging $5.0203 per ton, a total of 452,900 tons, averaging $7.8812 per ton.

The expenditure on mining was $665,783.44, or $1.47 per ton milled.

The expenditure on development and exploration work charged to operating was $611,829.09, or $1.351 per ton milled. This includes $98,692.51 for outside exploration work carried on during the year or written off from suspense.

The ore drawn from the Dome Extension ground during the year was 103,713 tons, containing $655,722.87, or $6.3225 per ton.

Eighteen fire doors of steel and concrete have been installed in the drifts and crosscuts leading from No. 3 shaft; by closing these it is now possible to completely isolate No. 3 shaft from the mine.

Ore Reserves

The ore reserves are estimated at 1,300,000 tons; this includes 740,000 tons of broken ore. Most of the additions to ore reserves made during the year were in the greenstone stopes.

Exploration

Our exploration engineers have continued their efforts to find desirable mining properties throughout the year without success. The number of propositions considered and examined probably exceeds any previous year.

Mill

The following are the results of the mill operation for the period from January 1 to October 28, when it was destroyed:—

	Total value	Value per ton	Extraction, per cent.
Heads	....	$7.8813	....
Amalgamation bullion	$2,343,653.33	5.1748	65.6591
Cyanidation bullion	1,088,889.66	2.4042	30.5060
Total	$3,432,542.99	$7.5790	96.1651

The tonnage milled during the period was 452,900, as against 548,000 for the full year 1928. The extraction was 96.1651 per cent., as against 95.6307 per cent. for the year 1928. The improvement in this respect is believed to be due to more coarse gold in the ore, though more gold may have been recovered from the mill.

During the summer the walls of the main tailing storage dam have been raised to give an increased storage capacity of about two years.

General

Operating costs amounted to $4.479 per ton milled, as compared with $3.852 for the previous year; the difference is accounted for by the mill having operated for less than ten months during the year; there was also an increase in ore broken in stopes, in development work done, and in exploration. Development work was also carried out at greatly increased distances from the main shaft. For the first ten months of the year when the mill was operating, the cost was $3.943 per ton milled.

Since the mill was burned, careful consideration has been given to various proposals for treating our ore. It appears unlikely that a decision can be reached in this matter without making some metallurgical tests, and steps have been taken to do this. The work of clearing away the debris has been taken in hand and is being accomplished as quickly as weather conditions permit. It is expected that our plans will be completed as soon as it will be possible to start on their execution.

The closing down of the crusher station has afforded us an opportunity to install a Symons cone crusher, which will greatly improve the operation of this plant and lessen the cost of milling.

Dunkin Gold Mines, Limited

This company has an authorized capital of $4,000,000, divided into shares of $1 par value each. Of these shares, 1,500,000 were issued for the property and 1,500,000 have been issued to carry on the development work, leaving the balance of the shares in the treasury.

The officers of the company are: R. Home Smith, president; J. H. Black, vice-president; J. S. Masson, secretary; Colin A. Campbell, manager. The directors are: R. Home Smith, J. H. Black, J. R. L. Starr, J. S. Masson, Jas. A. Dunn, W. F. Spence, and S. A. Shoemaker. The head office of the company is the Northern Ontario Building, Toronto, and the mine address is Narrow Lake, Ont.

The company's holdings include thirteen claims at the end of the west arm of Narrow lake, K.R.L. 4,428-30, 4,433-38, 4,447-49, 4,926, located in the township of Skinner, district of Kenora (Patricia portion).

Early in 1927, a considerable amount of assessment work was done on the properties, and the vein was uncovered for 250 feet with a width of from 2 to 12 feet. The vein has been traced by cross-trenches from the lake on claim K.R.L. 4,447. It runs east across K.R.L. 4,434 to the lake and shows up again on K.R.L. 4,435. The strike is N. 80° E., and the dip is 75° N.

A plant was hauled to the property and installed early in 1928. This includes the following: an 80 h.p. locomotive boiler; a Canadian Ingersoll-Rand air compressor, FR-1, straight-line, capacity 528 cubic feet per minute; a Canadian Ingersoll-Rand hoist, 7 by 6 feet, type SSR.

A headframe, 30 feet in height, was erected, the shaft being located near the centre of claim K.R.L. 4,434. Sinking of a three-compartment shaft was started by hand on July 25, 1928.

The shaft was sunk during the year to a depth of 271 feet with levels at the 125- and 250-foot horizons. The following drifting and crosscutting were done:—

Level	Crosscutting	Drifting
	feet	feet
125-foot	56	....
250-foot	423	227

The buildings at the property, all of log construction, include the following: two sleep camps, 20 by 30 feet and 16 by 22 feet; cookery, 20 by 30 feet; storehouse, 18 by 24 feet; office, 18 by 24 feet; power-house, 33 by 36 feet; dry-house, 18 by 22 feet.

A saw-mill with about 7,000 board feet capacity was erected on the lakeshore below the shaft-house during the winter.

When operations were in progress during the summer, a crew of 30 men was employed.

The property was shut down on March 29, 1929, and arrangements were made to sell the equipment.

Golden Summit Mines, Limited

The Golden Summit Mines, Limited, operated their property on the boundary line of Maisonville and Grenfell townships, district of Timiskaming, with a force of 10 men from June, 1929, to April 15, 1930, at which time the force was reduced to 2 men. The officers and directors of the company are: Thomas A. Wilson, president; Charles Ling, vice-president; William J. Simpson, secretary-treasurer; John A. Gunn, John M. Calder, Benjamin Kerr, Henry A. Marsh, directors. W. J. Simpson is manager. The company has a capital of $2,500,000, and the head office is at 594 Bloor Street West, Toronto.

The development for the year comprised 142 feet of shaft-sinking and 86 feet of drifting east of the shaft on the 125-foot level. There was also some trenching and test-pitting done.

Gold Rock Mines, Limited

This company has an authorized capitalization of 4,000,000 shares of no par value.

The officers and directors are: J. O. Robillard, president; T. W. Bathurst, vice-president; H. L. Nichol, managing director and secretary-treasurer; R. S. Harrison, director. The head office is at 315 Ottawa Electric Building, Ottawa.

The properties held by this company are located in the Dryden gold area and consist of five groups of claims. These claims were taken over from the Gold Rock Mining Syndicate, Limited, being paid for by shares in the present company.

The company has a winter road, 24 miles long, from Wabigoon, on the Kenora division of the Canadian Pacific Railway, to the camps on Upper Manitou lake. In the summer transportation is by water with a portage between Manitou lake and Wabigoon lake.

Underground work to date has been confined to what is known as the Haycock property. A shaft has been put down 87 feet and a crosscut driven 170 feet.

Miles Walker is in charge of operations.

Haslat–Duck Lake Mines, Limited

This company has an authorized capital of 5,000,000 shares of $1 par value.

The officers and directors are: F. A. Kent, president; W. H. MacMahon, vice-president; W. F. Stewart, secretary-treasurer; J. M. Aitken, F. C. Loring, J. E. Thompson, and R. C. Harrison, directors. The head office is at 202 Hamilton Trust Building, Toronto.

The property of the Haslat–Duck Lake Mines, Limited, consisting of 27 claims, is situated on Duck lake, which is about 16 miles north of Schreiber, a divisional point on the Canadian Pacific railway. Transportation is by canoe in summer and by tote road in winter.

During the winter of 1928-29, a small steam plant was taken in from Schreiber, and during 1929 two shafts were sunk to a depth of 100 feet and some 60 feet of lateral work was done. However, most of the work has been confined to stripping, trenching, and test-pitting, and some 35 veins of various widths have been exposed, some of which show values in lead, zinc, copper, and gold.

On December 15, 1929, all operations at the property were closed down owing to lack of finances.

M. L. Bouzan was in charge of operations.

Hayden Gold Mines, Limited

This company is capitalized at $5,000,000, in shares of $1 par value. There are 4,297,168 shares issued.

The following are the officers and directors of the company: Jas. S. Pierce, president; B. W. Lang, vice-president; W. Spaulding, secretary-treasurer; B. J. Fryatt, R. Berkinshaw, Joseph Montgomery, B. Sproule, E. D. Phillips, and Henry McK. Hasserot, directors. The head office is at 509 Brisbane Building, Buffalo, N.Y., and the mine office is at Timmins, Ont.

The company's holdings are in the townships of Ogden and Deloro, district of Cochrane, and consist of 8 claims, with an option on 5 more directly west of the original group.

A diamond-drill campaign starting in December, 1927, has been carried on, and some 10,000 feet of drilling accomplished. An electrical survey has also been made during the year.

In May, 1929, the old buildings on the property were reconstructed, and following this some new structures were erected. A tile hoist-house, 30 by 32 feet, which also houses the compressor and a small 20 h.p. heating boiler, was built. A 10- by 16-foot electric substation, a 12- by 14-foot magazine, and a 12- by 16-foot boiler-house were also put up. The camp buildings will accommodate about 22 men.

Previous operators on this property have sunk the main shaft 719 feet and established levels at the 100-, 200-, 300-, 400-, 550-, and 700-foot horizons. On all levels but the 550-foot the main vein on which the shaft started has been drifted on. The total lateral work on the property amounted to about 1,400 feet.

In August, the dewatering of the mine began, and in October the water was below the 550-foot level. Work on the 300-foot level was at once started, and during the year a total of 685 feet of crosscutting and drifting done. On the 700-foot level 260 feet of lateral work was done during the year. Early in 1930 the work was curtailed somewhat on account of finances.

An average of 12 men was employed throughout the year. Seymour Stevens is in charge of the property.

Hollinger Consolidated Gold Mines, Limited

The authorized capital of this company is $25,000,000, in 5,000,000 shares of $5 par value; 4,920,000 shares were outstanding on December 31, 1929. The head office is at Timmins, Ontario.

The officers of the company are: Noah A. Timmins, president; L. H. Timmins, vice-president; John B. Holden, secretary-treasurer; A. F. Brigham, general manager; John Knox, assistant general manager. The directors are: Noah A. Timmins, L. H. Timmins, John B. Holden, Jules R. Timmins, Wilson Bell, Senator W. L. McDougald, and Leo. H. Timmins.

The following information is taken from the nineteenth annual report of the directors to the shareholders, covering operations for the year ending December 31, 1929:—

ASSETS

CAPITAL:			
Mining properties			$22,493,785.17
Plant, brought forward from 1928		$1.00	
Plant, additions during 1929		39,330.50	
		$39,331.50	
Less depreciation for 1929		39,330.50	
			1.00
Investments in other companies and properties:			
Brought forward from 1928		56,923.14	
Outlay during 1929		7,011.37	
		$63,934.51	
Less depreciation for 1929	$4,301.53		
Less expenditures on properties abandoned	5,556.75		
		9,858.28	
			54,076.23
Tailings disposal site:			
Brought forward from 1928		8,416.80	
Less depreciation for 1929		8,415.80	
			1.00
Outlay to date in respect of Kamiskotia claims			399,581.34
			$22,947,444.74
DEFERRED:			
Material and supplies on hand		$439,572.47	
Solutions on hand		98,315.44	
Precipitates on hand		5,176.00	
Litharge, slags, etc., on hand		743.00	
Charges paid in advance, fire insurance		1,028.70	
			544,835.61
CURRENT:			
Cash on hand, in bank	$409,261.50		
Bullion in transit	389,016.81		
Accounts receivable	42,607.47		
		$840,885.78	
Investments:			
International Bond and Share Corporation stock	$11,195,980.00		
Call loans	595,000.00		
Accrued interest on investments	208,626.90		
		11,999,606.90	
			12,840,492.68
			$36,332,773.03

LIABILITIES

CAPITAL STOCK:		
Authorized	$25,000,000.00	
In treasury	400,000.00	
		$24,600,000.00
CURRENT LIABILITIES:		
Wages unpaid	$151,455.21	
Accounts payable	281,157.70	
		432,612.91
Reserve for taxes, Dominion of Canada and municipal		190,000.00

LIABILITIES—*Continued*

SURPLUS:		
Balance of account from 1928	$10,669,553.72	
Added to surplus per profit and loss account	440,606.40	
Net surplus carried forward		$11,110,160.12
		$36,332,773.03

The president makes the following statement with reference to the newly formed International Bond and Share Corporation and the Kamiskotia property:—

During the year the organization of the International Bond and Share Corporation, the securities subsidiary incorporated by the Hollinger company, was completed, and the company commenced operations on the first of August, as of which date they took over the investments of the Hollinger company at their then market value, namely $11,195,980, the Hollinger company receiving in payment preferred and common shares of the subsidiary company. This transaction explains the item on the balance sheet under investments "International Bond and Share Corporation stock, $11,195,980.00," and accounts for the disappearance from the balance sheet of the investments formerly held by your company. Statements are now being prepared showing the condition of the subsidiary company and further details will be submitted at the annual meeting. The other items under investments, namely, call loans and accrued interest on investments, are self-explanatory.

No further comment on the balance sheet seems to be necessary but it is perhaps desirable to point out that, as the result of the year's operations, the substantial sum of $440,606.40 has been added to surplus, which now stands at $11,110,160.12.

Pending a decision of the Ontario Government to extend the Timmins branch of the Temiskaming and Northern Ontario Railway to the Kamiskotia district, a distance of about seventeen miles, work on your Kamiskotia property has been shut down throughout the entire year. Your directors pointed out last year that the building of the railway would not only serve a promising new mining field but should prove of value as a colonization road. They have shown their faith in your property by the expenditure to date of almost $400,000, they are willing to expend at least $500,000 in the erection and equipment of a concentrator, and they are even prepared to go further and have offered to make a substantial contribution towards meeting any operating loss on the proposed branch line, notwithstanding their contention that the extension of the railway is entirely a government enterprise, the cost of which should be borne by the Government as has been done in the case of other extensions. The Hollinger company is only interested in a comparatively small portion of the vast area that will be opened up by the proposed railway, and your directors feel that they have gone as far as should reasonably be expected in offering to assume a special obligation in connection with an enterprise for the benefit of the entire province.

The number of our shareholders continues to increase and is now about eight thousand. The geographical distribution of the ownership of the outstanding shares is as follows: owned in Canada, 4,492,461 shares; in the United States of America, 392,879 shares; in Great Britain, 19,454 shares; elsewhere, 15,206; total, 4,920,000 shares.

Conditions at the mine and mill are satisfactory.

Labour conditions were also satisfactory throughout the year, and there is no reason to anticipate any change in this situation. The available supply of labour keeps well ahead of our requirements.

The following is taken from the report of the general manager for the year ending December 31, 1929:—

PROFIT AND LOSS STATEMENT

SOURCES OF INCOME:		
Gold and silver produced		$9,433,767.14
Premium on U.S. exchange		63,802.15
Interest on investments and other income		669,637.96
		$10,167,207.25
DISPOSAL OF INCOME:		
General charges	$684,060.38	
Mining charges	4,425,299.04	
Milling charges	1,016,368.80	
		6,125,728.22
Operating profit		$4,041,479.03

PROFIT AND LOSS STATEMENT—*Continued*

DEDUCT (taxes):			
Province of Ontario	$19,806.60		
Royalty to town of Timmins	17,059.98		
Municipal to town of Timmins	91,250.25		
Municipal to township of Tisdale	2,143.44		
Dominion of Canada re 1928	3,974.65		
Dominion of Canada and municipal, reserve for	190,000.00		
		$324,234.92	
Adjustments on sale and realization of securities		21,033.13	
DEPRECIATION:			
Plant	$39,330.50		
Tailings disposal site	8,415.80		
Investments in other companies and properties written down	4,301.53		
Expenditures on properties abandoned	5,556.75		
		57,604.58	
			402,872.63
NET PROFIT FROM OPERATIONS			$3,638,606.40
PAID OUT IN DIVIDENDS			3,198,000.00
ADDED TO SURPLUS			$440,606.40

BULLION STATEMENT

Inventory, January 1, 1929:		
Solutions		$120,583.80
Slags, litharge, and miscellaneous		743.00
Precipitates held over		4,430.00
Total		$125,756.80
Values produced in 1929:		
Ore milled	$9,805,963.14	
Tailings loss	372,196.00	
		9,433,767.14
		$9,559,523.94
Inventory, December 31, 1929:		
Solutions		98,315.44
Slags, litharge, and miscellaneous		743.00
Precipitates held over		5,176.00
		$104,234.44
Bullion shipped		9,455,289.50
		$9,559,523.94

The yearly average costs are as follows:—

DISTRIBUTION OF GENERAL CHARGES

Account	Sundries	Labour	Stores	Total	Per ton ore milled
General miscellaneous charges and administration	....	$305,705.05	$54,702.59	$360,407.64	$0.2328
Surface services	....	35,866.84	26,328.73	62,195.57	.0401
Insurance	$14,167.68	....	....	14,167.68	.0091
Marketing bullion	32,119.80	....	....	32,119.80	.0207
Workmen's compensation	....	215,169.69	....	215,169.69	.1389
Milling charges	....	393,670.31	622,698.49	1,016,368.80	.6561
Mining charges	....	2,982,117.43	1,443,181.61	4,425,299.04	2.8565
Total charges	$46,287.48	$3,932,529.32	$2,146,911.42	$6,125,728.22	$3.9542

Employees

The average number of men employed during the year has been 2,105, distributed as follows:—

MINERS:	
Exploration	32
Development	344
Production	1,090
Total	1,466

MECHANICS:	
Operation	98
Maintenance	151
Total	249

GENERAL:	
Mill and refinery	178
Engineering staff	54
Clerical staff	41
Miscellaneous	117
Total	390

The Mill

Milling results were as follows:—

Ore milled	tons		1,549,157
Average value per ton			$6.33
Gross value		$9,805,963.14	
Deduct loss in tailings		372,196.00	
Net value recovered			$9,433,767.14

Average tons per day		4,268
Per cent. of possible time run		95.7
Tons per 100 per cent. running time		4,460
Solution precipitated per ton ore	tons	1.14
Value per ton in tailings		$0.24
Cyanide consumed per ton of ore	lbs.	0.430
Zinc consumed per ton of ore	lbs.	.054
Zinc consumed per ton of solution	lbs.	.047
Lime consumed per ton of ore	lbs.	2.083
Lead nitrate per ton of ore	lbs.	.009
Average value of pregnant solution		$5.37

The Mine

The development progress during the year was as follows:—

Level	Drifts	Crosscuts	Raises	Diamond-drilling	Timbering stopes	Excavation
	feet	feet	feet	feet	feet	tons
Surface	....	....	....	5,778	....	....
100-foot	103	195	....	2,842	....	....
200-foot	4,248	1,927	58	11,190	960	....
300-foot	3,851	663	362	7,168	1,232	312
425-foot	2,710	2,028	462	8,220	635	144
550-foot	2,425	1,411	167	5,466	311	50
675-foot	3,757	2,026	....	9,023	1,013	....
800-foot	3,401	1,315	....	7,216	1,368	....
950-foot	2,049	1,226	....	3,080	382	284
1,100-foot	2,453	1,190	....	2,993	103	....
1,250-foot	1,103	419	....	1,189	212	....
1,400-foot	2,050	955	....	2,892	207	....
1,550-foot	1,308	442	....	2,992	118	....
1,700-foot	879	533	....	2,662	187	....
1,850-foot	547	741	....	2,956	179	....
2,000-foot	1,223	781	....	7,824	570	....
2,150-foot	1,269	330	17	1,241	2,085	....
2,300-foot	2,238	983	....	5,851	1,657	....
2,450-foot	3,198	2,074	....	9,607	1,292	....
2,600-foot	2,450	2,987	17	6,185	476	....
2,750-foot	1,720	3,257	....	8,997	....	340
3,050-foot	160	171	....	183	....	....
3,350-foot	39	323	....	442	....	....
3,650-foot	54	247	....	....	....	260
3,950-foot	280	2,950	....	3,627	....	....
Total	43,515	29,174	1,083	119,624	12,987	1,390

The total drifting, crosscutting, and raising was 73,772 feet. There was no shaft-sinking done during the year.

PRODUCTION

Level	Broken ore in mine, Jan. 1, 1929	Ore broken during 1929	Ore removed during 1929	Broken ore in mine, Dec. 31, 1929
	tons	tons	tons	tons
Above 100-foot	15,494	3,068	15,487	3,075
Above 200-foot	235,229	213,368	274,465	174,132
Above 300-foot	74,967	113,460	128,756	59,671
Above 425-foot	19,875	97,609	73,532	43,952
Above 550-foot	70,274	43,836	60,292	53,818
Above 675-foot	76,768	135,289	131,587	80,470
Above 800-foot	30,916	171,686	110,783	91,819
Above 950-foot	31,400	84,820	71,869	44,351
Above 1,100-foot	53,952	39,850	59,315	34,487
Above 1,250-foot	67,525	73,581	93,001	48,105
Above 1,400-foot	61,038	50,466	53,693	57,811
Above 1,550-foot	90,464	46,867	72,750	64,581
Above 1,700-foot	93,411	31,551	37,997	86,965
Above 1,850-foot	113,929	25,367	47,422	91,874
Above 2,000-foot	60,719	48,622	46,480	62,861
Above 2,150-foot	10,022	93,845	84,725	19,142
Above 2,300-foot	5,832	96,861	70,026	32,667
Above 2,450-foot	787	90,653	64,563	26,877
Above 2,600-foot	60	34,690	31,882	2,868
Above 2,750-foot	....	15,725	15,725	....
Above 3,050-foot	....	1,098	1,098	....
Above 3,350-foot	....	341	341	....
Above 3,650-foot	....	341	341	....
Above 3,950-foot	....	2,678	2,678	....
Total	1,112,662	1,515,672	1,548,808	1,079,526

SUMMARY OF ORE RESERVES

Vein No.	Tons	Value per ton	Estimated gross value, Dec. 31, 1929	Estimated gross value, Dec. 31, 1928
Veins over $10:				
97	71,713	$19.06	$1,366,663	$1,691,931
206	10,767	13.33	143,537	548,900
64	4,078	11.91	48,583	48,583
86	91,606	11.81	1,081,567	1,419,959
13	12,607	11.74	147,992	186,390
38	5,650	11.39	64,356	64,356
84	200,717	11.38	2,284,106	2,381,486
1	76,404	11.07	845,518	849,183
5	18,517	11.06	204,829	217,595
50	92,944	11.04	1,025,989	1,242,558
56	30,935	10.80	334,013	412,096
26	9,270	10.55	97,811	228,634
111	6,247	10.39	64,904	98,327
99	17,952	10.25	184,004	157,257
15	54,180	10.22	553,576	512,813
20	54,568	10.05	548,537	573,120
16	15,090	10.01	151,043	151,043
96	....	....	....	10,950
200	....	....	....	46,713
Total	773,245	$11.83	$9,147,028	$10.841,894
Veins, $10 to $8:				
2	87,875	$9.96	$875,568	$869,374
63	59,538	9.82	584,383	676,731
8	11,136	9.62	107,180	101,543
4	32,542	9.57	311,458	263,771
66	38,637	9.41	363,766	485,963
51	29,414	9.37	275,518	368,966
58	57,183	9.36	535,135	760,062

SUMMARY OF ORE RESERVES—*Continued*

Vein No.	Tons	Value per ton	Estimated gross value, Dec. 31, 1929	Estimated gross value, Dec. 31, 1928
Veins, $10 to $8—*Continued:*				
48	5,703	$9.24	$52,677	$64,670
221	867	9.20	7,976	....
91	187,790	9.12	1,713,410	1,575,695
37	21,202	9.12	193,369	149,822
85	253,304	9.11	2,307,753	2.727.739
65	115,943	9.08	1,052,610	909,927
101	61,578	9.02	555,183	710,969
14	15,133	8.99	135,988	357,413
55	230,457	8.98	2,069,787	2,541,194
88	33,486	8.98	300,630	439,131
33	42,936	8.92	382,932	499,042
113	2,443	8.85	21,615	64,844
59	122,769	8.83	1,084,146	441,130
92	71,560	8.82	631,356	1,236,848
114	269,448	8.75	2,358,014	2,088,721
44	68,183	8.67	591,073	770,246
53	134,560	8.61	1,158,438	1,300,251
177	55,291	8.60	475,592	236,842
95	276,775	8.56	2,369,098	1,288,437
61	4,543	8.50	38,615	38,615
12	100,295	8.39	841,411	1,451,096
52	35,304	8.33	294,231	372,982
21	5,119	8.31	42,544	41,916
17	4,425	8.31	36,772	65,007
93	43,275	8.31	359,531	296,697
87	14,623	8.30	121,348	278,232
54	100,021	8.24	824,204	885,920
9	30,366	8.22	249,655	275,920
214	12,347	8.01	98,892	75,049
220	1,195	8.00	9,560	122,437
124	....	....	....	16,825
19	....	....	....	46,196
Total	2,637,266	$8.88	$23,431,418	$24,896,223
Veins, $8 to $6:				
39	3,787	$7.89	$29,895	$29,895
103	1,310	7.79	10,202	....
11	2,276	7.74	17,618	....
107	245,286	7.69	1,886,846	2,424,072
24	4,115	7.56	31,121	....
226	3,650	7.38	26,949	92,660
150	2,245	7.35	16,501	39,426
25	4,713	7.29	34,335	....
47	29,674	7.23	214,400	225,943
68	28,577	7.20	205,625	490.333
10	31,001	7.16	222,067	109,628
67	16,211	7.07	114,670	141,148
115	9,164	7.04	64,513	97,915
3	10,922	6.95	75,938	86,149
7	4,567	6.67	30,462	59,727
151	17,853	6.47	115,455	....
82	1,648	6.44	10,613	42,350
18	24,727	6.42	158,690	189,932
224	4,468	6.36	28,422	32,994
218	15,043	6.19	93,061	67,889
112	....	....	....	307
153	....	....	....	23,924
Total	461,237	$7.34	$3,387,383	$4,154,292
Total ore reserves	3,871,748	$9.29	$35,965,829	$39,892,409
Surface outcrops	10,530	7.08	74,505	231,620
Probable ore under $6	2,477,743	4.75	11,779,064	11,086,206
Total	6,360,021	$7.52	$47,819,398	$51,210,235

Development

During the year 1928 it became evident, owing to changes in the character of the ore bodies in the lower levels, that the system which had heretofore proved rapid and satisfactory, where the veins were regular and of comparatively uniform grade, would not serve under the changed conditions. Therefore, it was determined to suspend a large part of the development programme on the lower levels, pending a geological investigation of the problem.

As was announced at the last annual meeting, Dr. L. C. Graton of Harvard, with a corps of assistants, was engaged to conduct this work. They have so far confined their efforts to fundamental studies of general geological features during the past year and will continue in this phase of the work during 1930. In the meantime, mining and development have been continued on the upper levels, above the 800-foot principally, from which 790,000 tons were hoisted, with a depletion of 372,000 tons. Above this horizon the value of the remainder is approximately $9, and a further 900,000 tons of additional reserve remain, of a value between $4.50 and $6, which will yield a profit, as the greater part of the development chargeable against this has been done. A further three-quarters of a million tons was taken from the lower levels, where the reserve tonnage was increased by 206,000 tons, notwithstanding the reduced programme of development.

Referring to the development schedule, it will be seen that 29,174 feet of crosscuts were driven in 1929, as compared with 51,120 feet in 1928, showing a decrease of about 22,000 feet, which is in accordance with the notation re deferred development as above. This must necessarily be reflected in the ore reserves, which were depleted to the extent of 200,000 tons, as compared with 875,000 tons during 1928. These figures are not exactly comparable as the milling rate was greater in 1928 than in 1929, but they indicate better conditions.

Work was also continued on the Schumacher and adjacent sections on the lower levels, with developments as follows: The shaft was completed at 4,040 feet. Levels were opened at 3,050, 3,350, 3,650, and 3,950 feet. Thus far over 100 feet of ore has been opened up below the 2,900-foot level, with values ranging from $8 to $8.50 and with other footages of lower values around $6. This work has not advanced far enough to make a reliable statement of tonnages, but progress will be made toward this end during the year. On the 2,900-foot level and above, veins aggregating about 1,200 feet in length, of approximately $8 ore, are in sight, as developed by drifting and diamond-drill holes. This ore will be available for milling during 1930.

Exploration

Our field force have been actively engaged throughout the year, and many properties have been investigated. None have so far been found interesting, but, having in mind the progress of Northern Ontario during the past ten years, we will continue to investigate, with optimism, as many prospects as possible.

General

The following résumé of progress from the beginning of operations might be of interest at this time:—

Total income from all sources	$156,236,583.00
Working expenses, including all charges	94,418,925.00
Profits	$61,817,658.00
Paid out in dividends	51,342,400.00
Surplus	11,110,160.12

To the above gross figures should be added the balance of ore reserves at this date, and all further additions thereto, to get a real picture of Hollinger and its operations.

Horse Shoe Mines, Limited

In the spring of 1929, this company started work on the old Regina mine in the Lake of the Woods area, about 42 miles from Kenora. The Regina mine was first known as the Black Eagle mine and dates back to 1893.

The authorized capital of this company is 4,500,000 shares of $1 par value.

The officers and directors are: A. Kelly Evans, president; W. A. Lamport, vice-president; J. C. Grace and Jas. Lumbers, directors. The head office is at 801 Excelsior Life Building, Toronto.

The work done was confined to repairing and altering the surface plant and dewatering the mine. Operations were suspended in August, 1929.

C. W. Dalby was in charge.

Jackson-Manion Mines, Limited

The Jackson-Manion Mines, Limited, is capitalized at $5,000,000 in shares of $1 par value; 2,500,000 shares have been issued.

The officers of the company are as follows: W. H. Russell, president; H. E. Harcourt, vice-president; H. Keefer, secretary; H. A. Currie, treasurer. W. J. Sheppard, J. B. Tudhope, Hon. J. D. Chaplin, Hon. R. J. Manion, and Hon. A. Turgeon are directors. The head office is located at 1507 Bank of Hamilton Building, Toronto.

The company is interested in 25 claims in the townships of Dent and Mitchell, Woman Lake area, district of Kenora (Patricia portion).

The Woman Lake area is accessible from the Canadian National railway by way of Hudson and Gold Pines (Pine Ridge), the latter at the outlet of Lac Seul. Large motor boats navigate between these two points, a distance of 115 miles. From Gold Pines there are two water routes, the most used of which is that down the English river to the mouth of the Chukuni, up the Chukuni to Pakwash (Shallow) lake, and Bruce lake to Trout Lake river, and up to Woman river, which is followed to Woman lake.

The area may be reached by air, the Western Canada Airways, Limited, maintaining an excellent passenger, mail, and express service. The trip from Hudson to Woman lake may be made in about an hour and thirty minutes by plane. The boat trip requires two days.

Active development was carried on throughout the year. The shaft reached a depth of 404 feet, with three levels, at the 125-, 250-, and 375-foot horizons. To the end of March, 1929, the following work had been accomplished:—

Level	Cross-cutting	Drifting		Raising	Diamond-drilling[1]
		north	south		
	feet	feet	feet	feet	feet
125-foot	80[2]	288	188	....	....
250-foot	161	279	95	95	295
375-foot	78	13	69	....	582

[1] Surface diamond-drilling (to July 20, 1929), 4,900 feet.

[2] To and through the vein.

Work on the property was suspended early in August, 1929.

During the early months of 1929, a force of 65 men was maintained at the property under the superintendence of D. M. Thomson.

Jones Porter Mines, Limited

This company is capitalized at $3,000,000, divided into shares of $1 each. There are 1,607,800 shares issued. The officers and directors are: A. J. Doane, president; M. H. McArthur, secretary-treasurer; William A. Porter, John Jones, L. L. Anthes, W. G. Harris, all of Toronto, and L. T. Burwash, of Ottawa, directors. The head office of the company is at 169 Yonge Street, Toronto.

The holdings of the company, in the southeastern portion of Deloro township, district of Cochrane, consist of 14 claims in a group. Gold was discovered on claim No. 10,800 in the summer of 1925.

Early in 1928 a shaft was put down 138 feet and a station cut at the 125-foot level. No further work underground has been done, but early in 1929 the plant of the old Croesus mine at Matheson was moved to the property and partially erected.

Kirkland Lake Gold Mining Company, Limited

Kirkland Lake Gold Mining Company, Limited, has a capital of 5,500,000 shares of $1 par value. The officers and directors are: D. B. Hanna, president; J. B. Tyrrell, vice-president; R. Graham, secretary; R. G. O. Thomson, A. C. Matthews, J. A. Dalton, J. C. Haight, and A. M. McQueen. W. M. Sixt is mine manager.

The head office is at 810 Lumsden Building, Toronto.

On an average, 110 men are employed at the mine, which is in the township of Teck, district of Timiskaming.

The following summary of operations for the year is taken from the managing director's report:—

The work of the year consisted chiefly of a downward exploration of your property. All other work of any kind, however important it might appear to be, was made secondary to this one main object.

In carrying out this plan, the winze was sunk from a depth of 3,251 feet to a depth of 4,033 feet, or a vertical distance of 782 feet. The station at the 3,225-foot level was completed, and stations were cut at 3,350-, 3,475-, 3,600-, 3,750-, 3,875-, and 4,000-foot levels.

The horizontal work consisted of 1,492 feet of crosscutting and 3,712 feet of drifting, all of the latter, except that on the 3,875-foot level, being on the main fault plane.

In addition to sinking, crosscutting, and drifting, 1,322 feet of diamond-drilling was done on the 3,225-foot level and 837 feet on the 3,600-foot level, 762 feet of this drilling on the 3,225-foot level having been done on behalf of the Chaput-Hughes Mines, Limited, in continuation of the work done for that company in 1928 on the 2,850-foot level.

New stopes were opened on the 2,850-, 2,975-, and 3,600-foot levels.

The total quantity of ore and rock raised during the course of this work was 81,363 tons, in addition to which 5,854 tons of rock was dumped underground in the old stopes.

During the year, 53,595 tons of ore were milled, from which gold to the value of $353,625.15 was recovered, or a yield of $6.60 to the ton. The extraction amounted to 90.21 per cent. of the gold content of the ore, and consequently the ore that went to the mill contained gold to the value of $7.32 to the ton.

Our total cost of operation was $430,767.29, and of this amount $187,000 was spent on exploration and development, but almost entirely on exploration. The heaviest single item of our cost was electric power, which amounted to a total of $55,760.04, or $1.04 per ton milled. We pay one cent per k.w. hour for power used, which, as you all know, is $65.39 per h.p. year, on which we received a load factor discount of 7 per cent., making the cost $60.81. In addition to this we pay a service charge that last year amounted to $14,709.26, which raised our rate to $82.60 a h.p. year.

As you can see by the above statement it has been necessary for us to draw on our reserve this year in order to get down quickly to the lower and richer ore-bearing zone. This was done in the confident belief that when the lower horizon, where porphyry would be present in large quantity, was reached more and richer ore would be found, after which the millheads could be raised and production could be increased.

The condition of the mine, as far as has been determined up to the present time, is about as follows: As in other parts of the Kirkland Lake area, much of the country rock on our claim is a dark, often almost black, lamprophyre, which, together with the sedimentary sandstones and conglomerates lying on it, and syenite, porphyry, and diabase intruded into it, have been sliced in two by a great steeply dipping fault running in a general east and west direction. The gold-bearing veins are in, or in the vicinity of, this fault. In our mine, syenite, mostly bright red in colour, forms two bands which extend through the lamprophyre and dip downward and westward at an angle of about 50 degrees from the vertical. Where the fault cuts these bands of syenite, ore-bearing veins occur in it, constituting two great westward-pitching ore shoots. In the lamprophyre above, between and below these syenite bands, there is very little ore in the fault. But we know that most of the ore in the mines to the east of us occurs associated with porphyry, not syenite or lamprophyre. We also know that a great mass of intrusive red porphyry outcrops about three-quarters of a mile east of our eastern boundary, and also that the western end of this great porphyry mass slopes westward as it goes down. We had encountered narrow dikes of porphyry, doubtless apophyses from this underlying mass, but we had never reached that mass itself. However, we have now reached it, as you will realize from the following brief statement. In a horizontal drill-hole, 300 feet deep, drilled northward from near the east end of the 3,225-foot level and north of the fault, we ran through 141 feet of porphyry all told. On the 3,600-foot level we also had a great width of porphyry north of the fault, but in addition we cut through porphyry for a width of 70 feet in the main crosscut south of the fault, and about 400 feet farther east on the same level, and also south of the fault, we found the porphyry 143 feet wide. A diamond-drill hole drilled downward forty feet south of the south end of this porphyry showed that this rock was getting still wider as it went down, and this diamond-drill hole also encountered three gold-bearing veins in a width of 60 feet, at about the 3,875-foot level.

At the end of the year the crosscuts on the 3,875- and 4,000-foot levels had not reached the south side of the fault, but porphyry was present in abundance north of it.

In the last week of December, the crosscut from the winze on the 3,875-foot level reached one of the three veins mentioned above, about 400 feet west of where it had been cut by the diamond-drill, and it was high grade.

On January 7, 1930, R. E. Hore, a mining geologist who has a very intimate knowledge of the pre-Cambrian rocks of Northern Ontario, and of the ore contained in them, visited the mine, and the following is an extract from his report:—

"From observations at the 32nd, 36th, 38th, and 40th levels, it is clear that a horizon similar to that in which the chief ore bodies of the camp occur has been finally reached. It is reasonable to expect that more important ore bodies than any yet found at this mine will be found in the near future.

"The length of favourable ground is now increasing rapidly. There is reason to expect that good results will be obtained in opening the 38th and 40th levels both east and west from the crosscuts.

"The ore of your upper levels occurs chiefly in two westward pitching shoots in a faulted mass of alkali syenite, which also pitches downward to the west. The secondary shaft has passed through the horizon of the footwall syenite, and the deeper workings are now in ground in which porphyry masses alternate with lamprophyre.

"The trend of all the formations exposed in the lower levels, as in the upper levels, is westward with depth.

"From my observations at the mine the work that you have done to date has obtained results which your early interpretation of the geological structure permitted you to expect. The poor results at the 32nd level were not anticipated, and the reason for the paucity of gold in this neighbourhood is not yet apparent. The deeper work shows, however, that the favourable porphyry-lamprophyre ground is not far below where you expected to find it, and there are already strong indications that it will prove up to expectations as a host for rich ore bodies.

"While it is somewhat easier to operate at lesser depths, the mining of large tonnages of ore from below 4,000 feet presents no obstacles which have not already been encountered and readily overcome elsewhere. The conditions for deep mining at Kirkland Lake are peculiarly favourable and far superior to those of many mining districts. If rich and large ore bodies like those of Teck-Hughes and Lake Shore mines occur below your 4,000-foot level, as may be reasonably expected, you should have a long period of profitable operations."

A competent system of ventilation has been installed to the bottom level of the mine.

Some of the large unused drifts have been converted into refuge stations, in accordance with the recommendation of the U.S. Bureau of Mines, and in case of danger the miners can take refuge in them. These stations are supplied with food, water, and light, are furnished with comfortable benches, and the doors are fire- and gas-proof. They are large enough to provide a livable supply of air for the whole crew of the mine for from two to four weeks. The men are trained to go to them in case of danger and wait until they are told that they can come out in safety, rather than to attempt a personal stampede which is usually disastrous. A second exit from the mine will very soon be completed.

During the year we purchased mining claim L. 2,644, which lies immediately south of our mining claim L. 1,236, from the Chaput-Hughes Mines, Limited, as well as two other claims farther south, the consideration being 239,123 shares of our company. We had done a large amount of development work on this property in a long crosscut and drift on the 1,600-foot level, and long diamond-drill holes on the 2,850- and 3,225-foot levels, without finding commercial ore, taking our pay for the work largely in stock in the company, and thus we became its largest shareholder. We were willing to take most of our pay in stock, because we believed that at great, but reachable depth, the fault which was dipping southward would dip into that claim, and that the ore shoot which accompanied that fault in the country to the east of us would pitch or rake westward, and that we would eventually get it. Otherwise the property would have been of no interest or value to us. Now the former shareholders of Chaput-Hughes Mines, Limited, will share with us in any success that we may achieve.

Lake Shore Mines, Limited

Lake Shore Mines, Limited, has a capital of 2,000,000 shares of a par value of $1. The executive officers of the company are: Harry Oakes, president and managing director; W. H. Wright, vice-president; Dr. W. P. St. Charles, treasurer; Kirkland Securities, Limited, secretary. The directors are: Harry Oakes, Albert Wende, Louis Oakes, and Ernest Martin. E. B. Knapp is mine superintendent. The mine and works are at Kirkland Lake, township of Teck, district of Timiskaming. During the year an average of 720 men was employed.

The following information is taken from the fourteenth annual report of the company for the year ending June 30, 1929:—

During the year 367,015 tons of ore were treated, yielding bullion to the amount of $5,504,858.64. This shows an increase of 129,053 tons milled over last year, with a corresponding increase in bullion of $1,875,541.07.

TOTAL PRODUCTION AND DIVIDENDS SINCE THE COMMENCEMENT OF MILLING OPERATIONS IN 1918

Period	Months	Tons milled	Bullion production	Dividends paid
Mar. 1, 1918, to Nov. 30, 1918..........	9	14,948	$369,680.31	$100,000
Dec. 1, 1918, to Nov. 30, 1919..........	9	11,907	294,513.72	100,000
Dec. 1, 1919, to Nov. 30, 1920..........	12	18,889	483,701.93	80,000
Dec. 1, 1920, to Nov. 30, 1921..........	12	21,681	460,186.37	120,000
Dec. 1, 1921, to June 30, 1923..........	19	36,825	833,664.89	160,000
July 1, 1923, to June 30, 1924..........	12	24,223	578,242.59	160,000
July 1, 1924, to June 30, 1925..........	12	96,838	1,812,494.66	600,000
July 1, 1925, to June 30, 1926..........	12	125,676	2,235,184.40	700,000
July 1, 1926, to June 30, 1927..........	12	214,335	3,105,047.85	1,200,000
July 1, 1927, to June 30, 1928..........	12	237,962	3,629,317.57	1,600,000
July 1, 1928, to June 30, 1929..........	12	367,015	5,504,858.64	2,000,000
Total.........................	....	....	$19,306,892.93	$6,820,000

Mining and Development

During the year 526,284 tons of ore were broken. Of this amount 92,922 tons were from development and 433,362 from mining, of which 367,015 tons were hoisted and milled and the balance, 159,269 tons, added to the broken ore reserves, which now amount to 393,297 tons, valued at $6,524,797.23.

No. 3 shaft has been completed from the 1,000- to the 2,000-foot level, with stations cut at 200-foot intervals. Crosscuts connect this with No. 1 shaft on all levels to the 1,600-foot level.

A steel headframe for the No. 3 shaft is now on order, also a 12- by 8-foot hoist. An additional compressor unit is also being installed.

No. 2 vein has been opened up to the western boundary on the 1,200- and 1,400-foot levels, and on the 1,600-foot level the drift extends the entire length of the property. Approximately 600 feet of drifting has been done on this vein on the 1,800-foot level, with values slightly better than any level yet encountered. The vein has also been cut on the 2,000-foot level, and shows excellent widths and values.

As more information is now available on the 1,600-foot level than on any other level, careful attention has been given to an estimate of the ore reserves between this and the 1,400-foot level, which shows a value of $13,000,000.

DEVELOPMENT FOOTAGE FOR YEAR 1928

Level	Drifting	Crosscutting	Raising	Shaft-sinking	Ore passing	Winzes	Total footage	Diamond drilling	Box-holes	Station-cutting	Total cubic footage
	feet	feet	feet	feet	feet	feet	feet	feet	cu. ft.	cu. ft.	cu. ft.
200-ft.	......	6	......	......	......	20	26	....	....	12,159	12,159
400-ft.	513	31	159	......	......	......	703	....	....	....	....
600-ft.	544	25	180	......	......	......	749	....	....	....	....
800-ft.	1,117	157	433	......	......	......	1,707	491	3,372	....	3,372
1,000-ft.	263	132	5,197	60	193	......	5,845	182	21,800	20,000	41,800
1,200-ft.	3,233	306	850	186	......	......	4,575	1,264	7,600	20,377	27,977
1,400-ft.	2,408	270	1,425	199	......	......	4,302	1,413	14,800	12,200	27,000
1,600-ft.	2,478	560	263	273	......	......	3,574	3,620	....	21,346	21,346
1,800-ft.	588	43	......	145	......	......	776	....	....	29,781	29,781
2,000-ft.	......	......	......	184	......	......	184	....	....	....	....
Total...	11,144	1,530	8,507	1,047	193	20	22,441	6,970	47,572	115,863	163,435

SUMMARY OF ORE AND WASTE HOISTED FOR THE YEAR 1928

Level	Ore from development	Ore from mining	Waste
	tons	tons	tons
200-foot	200	....	2,435
400-foot	2,973	16,239	17
600-foot	2,476	26,208	116
800-foot	10,067	120,309	163
1,000-foot	20,321	76,833	15,956
1,200-foot	23,378	11,735	12,390
1,400-foot	18,757	22,769	8,066
1,600-foot	11,586	....	15,444
1,800-foot	3,078	....	6,711
2,000-foot	86	....	5,960
Total	92,922	274,093	67,258

SUMMARY OF DEVELOPMENT AND EXPLORATION WORK SINCE BEGINNING OF OPERATIONS

	Feet
Drifting	38,335
Crosscutting	8,134
Raising	21,806
Sinking	4,462
Ore-passing	1,754
Winze	245
Diamond-drilling	23,409
	Cu. ft.
Box-holing	166,011
Station-cutting	277,989
Sump	26,239

Milling

The mill operated very satisfactorily during the year, and results obtained through double filtration have been very gratifying. An additional ball and tube mill were installed during the latter part of the fiscal year, as well as a Symons cone crusher, filters, presses, and refinery equipment.

The increased tonnage opened up underground has made additional milling equipment necessary and three ball mills and six tube mills, together with the necessary tanks, filters, and other equipment, have been ordered and when installed will effect a material increase in milling capacity.

Costs

No special attempt has been made during the year to bring the cost per ton milled, as given below, to a minimum. The slightly high figures are favourably reflected in the amount of ore placed in sight and the development on the lower levels, as well as the increase in broken ore reserves.

	Total cost	Cost per ton
Development	$856,540.97	$2.34
Mining	947,169.03	2.58
Milling and refining	448,201.56	1.22
General and administrative expense	73,631.64	.20
Total	$2,325,543.20	$6.34
Depreciation	297,199.86	.81
Grand total	$2,622,743.06	$7.15

General

The most interesting item of the year's work was the opening up of a vein system parallel to No. 2 vein, which has been proven to exist from the 200- to the 1,600-foot levels. This will compare favourably in grade to No. 2 vein, and is known to extend from our western boundary east to a point near the Wright-Hargreaves line.

The problem of mine backfilling has already been considered, and gravel claims to the east have been secured. Preliminary work, preparatory to handling daily tonnage of material from these claims, is now in progress.

New shops of fireproof construction are now being erected. Plans for a new office building have been completed, and construction is now under way.

McIntyre-Porcupine Mines, Limited

The authorized capital of this company is $4,000,000, divided into 800,000 shares of a par value of $5, of which 798,000 are issued.

The officers of the company are: J. P. Bickell, president; W. J. Sheppard, vice-president; M. P. Van Der Voort, secretary; Balmer Neilly, treasurer. The directors are: J. P. Bickell, W. J. Sheppard, J. B. Tudhope, D. H. McDougall, Strachan Johnston.

The mines and plant are at Schumacher, in the township of Tisdale, district of Cochrane. The head office of the company is at Schumacher, and the executive offices are at 15 King Street West, Toronto.

The following information is taken from the eighteenth annual report of the company, for the fiscal year ending March 31, 1929:—

Gross production and earnings exceed any figure previously established. Ore reserves now gross $19,417,424, with an average grade of $8.30 per ton. Comparing this total with $16,179,205, of $8 grade, as reported in the previous year, and having regard for this year's gross mine production of $4,657,188, it will be seen that the ore developed in the period under review had an estimated gross value of $7,895,407.

The company continues to pursue an aggressive development policy and constantly studies its probable future requirements, having regard for increased efficiency and economic capacity.

Research work in connection with our milling practice, while not yet definitely conclusive, has been productive of results reflecting great credit upon those conducting the work, and the information thus obtained is being carefully considered with a view to determining whether or not we may be warranted in changing our milling practice.

ASSETS

CURRENT ASSETS:			
Cash in banks and on hand		$184,370.65	
Bullion in transit		138,617.61	
Call loan		700,000.00	
Marketable securities (at market or less)		2,331,378.50	
Accounts receivable		4,127.97	
Interest receivable		24,767.67	
Supplies on hand at cost		270,770.29	
			$3,654,032.69
INVESTMENTS IN SUBSIDIARY COMPANIES:			
Blue Diamond Coal Co., Limited, and Canadian Coal Fields, Limited		$853,492.23	
McIntyre Mercantile Co., Limited		1.00	
			853,493.23
FIXED ASSETS:			
Mining properties		$4,194,339.97	
Plant and equipment:			
April 1, 1929	$3,550,986.84		
Net additions this year	139,083.37		
		3,690,070.21	
			7,884,410.18
DEFERRED CHARGES:			
Operating and administrative prepayments			30,633.95
			$12,422,570.05

LIABILITIES

CURRENT LIABILITIES:		
Payrolls payable	$65,432.33	
Accounts payable	47,143.58	
Provision for municipal, provincial, and Dominion taxes	176,817.41	
Provision for sundry liabilities	25,718.19	
		$315,111.51

LIABILITIES—*Continued*

RESERVES:		
General reserve	$400,000.00	
Reserve for depreciation of plant and equipment	3,559,318.81	
		3,959,318.81
CAPITAL LIABILITIES:		
Capital stock authorized, 800,000 shares at $5 par value	$4,000,000.00	
Capital stock issued, 798,000 shares at $5 par value		3,990,000.00
Surplus		4,158,139.73
		$12,422,570.05

The profit and loss statement for the year ending March 31, 1930, is as follows:—

EARNINGS:			
Bullion recovery			$4,457,000.97
OPERATING COSTS:			
Mining and development	$1,716,515.55		
Crushing and conveying	83,716.68		
Milling	380,391.37		
Miscellaneous camp costs	49,421.27		
		$2,230,044.87	
ADMINISTRATIVE AND GENERAL EXPENSE:			
Management and general expense, mine	$97,636.09		
Administrative and general expense, Toronto office	81,874.45		
Transfer, registrar, stock issue, and dividend expense	6,766.53		
Insurance	14,842.11		
		201,119.18	
Total operating costs, before providing for taxes and depreciation			2,431,164.05
Operating profit, before providing for taxes and depreciation			$2,025,836.92
NON-OPERATING REVENUES:			
Interest and discounts earned		$148,678.90	
Miscellaneous earnings		19,981.90	
			168,660.80
			$2,194,497.72
APPROPRIATIONS:			
Provision for municipal, provincial, and Dominion taxes for current year			122,197.90
Net profit for the year, before depreciation provision, transferred to surplus account			$2,072,299.82

The following is the surplus account:—

Surplus as at April 1, 1929		$3,809,536.48
Add net profit, year ending March 31, 1930, before providing for depreciation		2,072,299.82
		$5,881,836.30
DEDUCT:		
Dividend No. 42, June 1, 1929	$199,500.00	
Dividend No. 43, Sept. 3, 1929	199,500.00	
Dividend No. 44, Dec. 2, 1929	199,500.00	
Dividend No. 45, Mar 1, 1930	199,500.00	
	$798,000.00	
Provision for depreciation, buildings, and equipment	258,304.91	
Development undistributed, mine—written off	157,888.35	
Development expenditures on outside properties—written off	96,614.47	
Sundry adjustments	12,888.84	
Amount transferred to general reserve	400,000.00	
		1,723,696.57
Surplus as at March 31, 1930		$4,158,139.73

The following data are from the report of the general manager, R. J. Ennis, for the year ending March 31, 1930:—

PRODUCTION

Ore treated.......tons	550,495
Value per ton	$8.46
Gross value	4,657,188.00
Bullion recovered	4,433,626.45
Bullion recovered per ton	8.05
Bullion contained:	
Gold, 213,291.940 fine ounces	$4,408,936.89
Silver, 51,627.807 fine ounces	24,689.56
Premium on U.S. funds	23,374.52
	$4,457,000.97

PRODUCTION SINCE THE BEGINNING OF MILLING OPERATIONS IN 1912

Period	Months	Tons milled	Value per ton	Gross value	Recovery per ton	Total value
1912	12	14,500	$7.00	$101,555.16	$5.25	$76,166.38
1913	12	31,979	7.85	251,314.45	7.05	225,752.25
Jan. 1, '14, to Mar. 31, '15.	15	85,654	8.87	760,232.16	8.39	718,331.71
Apr. 1, '15, to Mar. 31, '16.	12	105,758	7.71	815,345.49	7.38	779,990.94
Apr. 1, '16, to June 30, '17.	15	195,307	10.00	1,954,793.28	9.55	1,864,914.28
July 1, '17, to June 30, '18.	12	178,327	10.05	1,793,197.55	9.61	1,714,258.00
July 1, '18, to June 30, '19.	12	179,874	9.78	1,759,627.40	9.29	1,671,646.03
July 1, '19, to June 30, '20.	12	188,835	11.52	2,175,891.31	11.02	2,080,178.44
July 1, '20, to June 30, '21.	12	171,916	11.67	2,005,672.00	11.08	1,904,326.36
July 1, '21, to June 30, '22.	12	193,971	10.69	2,074,088.40	9.99	1,937,105.07
July 1, '22, to June 30, '23.	12	240,615	9.96	2,397,303.00	9.35	2,249,741.63
July 1, '23, to June 30, '24.	12	360,140	9.69	3,488,863.00	9.14	3,291,178.22
July 1, '24, to June 30, '25.	12	400,259	9.43	3,774,068.00	8.86	3,546,637.52
July 1, '25, to June 30, '26.	12	460,909	8.72	4,020,326.00	8.25	3,804,774.90
July 1, '26, to Mar. 31, '27.	9	385,409	8.08	3,113,500.07	7.67	2,957,060.97
Apr. 1, '27, to Mar. 31, '28.	12	520,460	8.09	4,207,553.00	7.66	3,987,634.94
Apr. 1, '28, to Mar. 31, '29.	12	538,165	8.24	4,433,378.00	7.83	4,212,624.82
Apr. 1, '29, to Mar. 31, '30.	12	550,495	8.46	4,657,188.00	8.05	4,433,626.45
Total	....	4,802,573	$9.12	$43,783,896.27	$8.63	$41,455,948.91

MINING

	Tons
Ore broken in stopes	520,451
Ore from development	73,008
Total	593,459
Ore hoisted	550,593
Waste hoisted	3,528
Total	554,121
Waste used as back-fill	112,893

The ore broken in the mine during the year amounted to 593,459 tons, an increase of 23.5 per cent. over the preceding year; 550,593 tons were hoisted, and broken ore reserves increased by 42,866 tons. During the year 45 per cent. of production came from cut-and-fill stopes.

The following is a summary of ore hoisted from the different levels; no stoping has yet been done on the levels below the 2,875-foot. The tonnage hoisted from these levels consisted of ore and vein material broken in development work.

Level	Tons	Assay	Value
500-foot	52	$4.50	$233
600-foot	84	3.75	314
1,000-foot	322	15.05	4,845
1,250-foot	210	2.20	461
1,375-foot	36,409	7.80	285,067
1,500-foot	27,357	6.60	180,971
1,625-foot	16,750	6.70	112,079
1,750-foot	42,420	7.35	311,889
1,875-foot	56,499	7.00	396,353
2,000-foot	57,729	10.55	607,925
2,125-foot	45,910	8.20	376,327
2,250-foot	26,987	11.80	318,434
2,375-foot	87,991	6.20	546,561
2,500-foot	84,296	9.05	762,876
2,625-foot	29,064	11.70	340,492
2,750-foot	3,811	9.40	35,762
2,875-foot	11,744	7.85	92,311
3,000-foot	4,980	11.95	59,446
3,125-foot	2,882	5.15	14,910
3,250-foot	2,231	3.50	7,867
3,375-foot	5,477	3.75	20,472
3,500-foot	822	2.25	1,840
3,625-foot	12	2.00	24
3,750-foot	2,773	4.00	11,092
3.875-foot	3,781	4.50	16,015
Total	550,593	$8.15	$4,504,566

Development

Development work performed during the year amounted to 27,895 feet, a decrease of 6,476 feet from that of last year. This work included 17,271 feet of drifts, of which 2,540 feet was on line and 14,731 feet in vein material; 8,267 feet was in ore of $10 grade over drift width. Advance in ore was 34 per cent. greater than last year and is reflected in the estimate of ore reserves.

No. 3 Vein.—Stopes produced 118,116 tons of an average grade of $8 per ton. From the 1,500-, 1,625-, and 2,125-foot levels, a total of 3,241 feet of drifting was done, of which 1,041 feet was in ore of $12 grade over drift width.

No. 5 Vein.—Stopes produced 22,131 tons of an average grade of $8.90 per ton. A small amount of sublevel development work was done on the lower levels of this vein.

No. 7 Vein.—Stopes produced 129,391 tons of ore, of an average grade of $10 per ton. On the 2,500-, 2,625-, and 2,750-foot levels, 991 feet of drifting was done, of which 398 feet was in ore of $10 grade over drift width.

No. 8 Vein.—Stopes produced 15,563 tons of ore of an average grade of $3.90 per ton. No development work was done on this vein during the year.

No. 9 Vein.—Stopes produced 43,926 tons of ore, of an average grade of $9.10 per ton. On the 3,375- and 3,875-foot levels, 492 feet of development work was done, of which 238 feet was in ore of $8 grade over drift width.

No. 10 Vein.—Stopes produced 52,850 tons of ore, of an average grade of $6.30 per ton. On the 3,000-, 3,125-, and 3,875-foot levels, 1,053 feet of drifting was done, of which 666 feet was in ore of $15.80 grade over drift width.

No. 12 Vein.—Stopes produced 1,306 tons of low-grade ore. On the 2,000-, 2,125-, 2,250-, and 2,375-foot levels, 1,268 feet of drifting was done, of which 566 feet was in ore of $14.50 grade over drift width.

No. 13 Vein.—Stopes produced 40,364 tons of ore of an average grade of $9 per ton. On the 1,875-, 2,000-, 2,125-, 2,500-, 2,625-, 2,750-, 2,875-, 3,000-, 3,125-, 3,250-, and 3,875-foot levels, 3,623 feet of drifting was done, of which 1,874 feet was in ore of $11.10 grade over drift width.

No. 14 Vein.—Stopes produced 26,700 tons of ore, of an average grade of $7.60 per ton. On the 1,625-, 1,750-, 1,875-, 2,000-, 2,125-, 2,250-, 3,375-, and 3,875-foot levels, 3,617 feet of drifting was done, of which 1,656 feet was in ore of $6.25 grade over drift width.

No. 15 Vein.—On the 2,250-, 2,375-, and 3,875-foot levels, 1,051 feet of drifting was done, of which 545 feet was in ore of $5.50 grade over drift width. This is a new vein lying in a break south and east of No. 14 vein in the eastern part of the property.

No. 16 Vein.—Stopes produced 32,003 tons of ore, of an average grade of $9.20 per ton. On the 2,125-, 2,250-, 2,375-, and 2,500-foot levels, 1,861 feet of drifting was done, of which 1,369 feet was in ore of $8 grade over drift width.

No. 11 Shaft.—Ore handling facilities at No. 11 shaft were completed in October, and since then the full mine tonnage has been raised through this shaft. The completion of this work has enabled us to pursue development on most of the veins previously exposed in this area, from the 1,500-foot level down to the 3,875-foot.

Favourable developments on the upper levels necessitated stations at the 1,375- and 1,625-foot horizons and these have been cut, working from the No. 6 shaft or west side, without interruption, to No. 11 shaft operation.

On the levels below the 2,875-foot, a total of 6,422 feet of drifting has been done to date; 3,597 feet, or 56 per cent., was in ore of average grade over drift width. This record is better than the average obtained throughout the mine.

Mining operations on the 3,875-foot have until recently been confined to main drives and crosscuts. Drifting on veins commenced the latter part of the year, and 1,150 feet of drifting has opened up 205 feet of ore averaging $6 over drift width. As development work proceeds on the veins exposed, we anticipate results equal to the mine average.

Ore Reserves, 1929-30

	Tons	Assay	Value
McIntyre claims	695,205	$7.20	$4,981,717
McIntyre Extension claims	157,368	10.50	1,659,598
Jupiter claims	1,076,462	9.40	10,073,952
Plenaurum claims	164,095	6.40	1,048,755
	2,093,130	$8.50	$17,764,022
Broken ore	252,546	6.50	1,653,402
Total	2,345,676	$8.30	$19,417,424

Summary of Development and Exploration, 1929-30

Period	Drifts	Cross-cuts	Raises	Winzes	Shafts	Stations	Sumps	Pockets and passes	Total footage	Total excavation	Diamond-drilling
	feet	feet	feet	feet	feet	cu. ft.	cu. ft.	cu. ft.	feet	cu. ft.	feet
1	1,145	1,071	37			5,280			2,253	5,280	2,201
2	1,128	1,081	111			11,240			2,320	11,210	1,917.5
3	1,449	834	237						2,520		2,678
4	1,384	857	289						2,530		2,621
5	1,594	736	163						2,493		2,869
6	1,152	730	83						1,965		2,783
7	1,279	666	31						1,976		2,650
8	1,358	574	34						1,966		2,284
9	1,361.5	459.5	305						2,129.5		2,459
10	1,718.5	244	397			11,901			2,359	11,901	2,486
11	1,856	434	384						2,674		2,384
12	1,843	547	410			1,800			2,800	1,800	2,377
Total	17,271	8,233.5	2,481			33,224			27,985.5	33,221	29,709.5
Previous years	130,230.3	65,150.3	14,310.4	579.7	12,619.9	622,920	36,823	139,699	222,890.6	799,442	212,044.5
Total	147,501.3	73,383.8	16,791.4	579.7	12,619.9	656,144	36,823	139,699	250,876.1	832,666	241,754

Operating Costs

	Total	Per ton milled
MINING:		
Exploration	$52,442.41	$0.0953
Development	402,727.23	.7315
Breaking and stoping	1,247,236.41	2.2657
Examination of prospects	14,109.50	.0256
Total mining costs	$1,716,515.55	$3.1181
Crushing and transportation	$83,716.68	$0.1521
Milling	380,391.37	.6910
Heating and maintenance, buildings and camps	49,421.27	.0897
Bullion marketing and general expense, mine office	97,636.09	.1773
Administration and general expense, Toronto office	88,640.98	.1611
Insurance, general	14,842.11	.0270
Total	$2,431,164.05	$4.4163

ANALYSIS OF MINING COSTS PER TON MILLED

	Stoping	Drifting	Cross-cutting	Raising	Stations and sumps	Total cost	Cost per ton
Labour	$583,531.44	$140,613.75	$60,099.05	$40,585.90	$3,756.98	$828,587.12	$1.5052
Explosives	88,354.77	56,462.90	23,658.84	6,628.38	297.18	175,402.07	.3186
Supplies	50,388.46	18,914.20	11,146.55	21,434.08	2,017.50	103,900.79	.1887
Power	37,469.02	7,827.45	3,219.80	2,680.52	130.30	51,327.09	.0932
Timbering	147,550.94	...	215.80	843.72	3,567.32	152,177.78	.2764
Shaft repairs	7,695.52	...	...	...	...	7,695.52	.0140
Back-filling	55,277.85	...	...	...	...	55,277.85	.1004
Steel-sharpening	29,814.14	16,691.64	7,120.68	2,559.36	156.79	56,342.61	.1023
Drill repairs	13,008.72	4,010.38	1,649.42	1,369.46	100.69	20,138.67	.0366
Surveying and engineering	23,252.70	5,460.97	2,132.63	2,002.80	122.82	32,971.92	.0599
Sampling and assaying	36,218.66	3,021.42	1,360.28	1,136.05	...	41,736.41	.0758
Pumping	4,815.11	1,786.43	3,202.27	158.46	...	9,962.27	.0181
Ventilating	6,225.45	3,310.87	1,695.40	867.20	106.29	12,205.21	.0222
Tramming	66,991.36	22,175.85	10,950.42	4,481.71	160.13	104,759.47	.1903
Surface tramming	...	1,809.67	1,308.28	728.33	311.51	4,157.79	.0076
Hoisting	96,642.27	29,310.00	15,991.27	8,388.29	877.59	151,209.42	.2747
Total	$1,247,236.41	$311,395.53	$143,750.69	$93,864.26	$11,605.10	$1,807,851.99	$3.2840
Less: Charged to undistributed development	...	...	74,050.68	72,232.57	11,605.10	157,888.35	.2868
	$1,247,236.41	$311,395.53	$69,700.01	$21,631.69	...	$1,649,963.64	$2.9972
Exploration	...	...	...	...	...	52,442.41	.0953
						$1,702,406.05	$3.0925
Examination of prospects	...	...	...	...	...	14,109.50	.0256
Total	...	...	...	...	...	$1,716,515.55	$3.1181
Unit cost per ton	$2.2657	$0.5656	$0.1266	$0.0393	...	...	...

Milling

The cyanide mill operated continuously at full capacity during the year. To confirm laboratory experiments a flotation unit was installed in November. It is now handling 200 tons of ore per day with very satisfactory results and it has demonstrated that this method is applicable to the treatment of McIntyre ores, with a reduction in costs and improved metallurgical results.

MILLING COSTS

	Labour	Supplies	Repairs and maintenance	Power	Total	Costs per ton
Ball milling	$8,078.66	$25,719.39	$345.60	$12,396.75	$46,540.40	$0.0845
Tube milling	7,896.71	53,573.94	748.40	29,541.22	91,760.27	.1667
Classification	7,777.18	3,484.56	947.45	3,714.68	15,923.87	.0289
Flotation	4,606.66	4,413.53	178.20	2,876.08	12,074.47	.0219
Pumping and elevating	6,006.98	4,683.65	668.60	4,144.01	15,503.24	.0282
Agitation	6,006.98	2,275.98	367.80	5,993.52	14,644.28	.0266
Thickening	6,006.98	2,251.97	361.20	2,197.37	10,817.52	.0197
Clarification	8,793.29	3,428.62	474.20	1,666.00	14,362.11	.0261
Precipitation	6,366.29	12,408.12	91.40	2,048.53	20,914.34	.0380
Re-agents	...	69,585.91	...	...	69,585.91	.1264
Filtration	15,113.34	3,964.68	589.50	3,472.47	23,139.99	.0420
Refining and assaying	15,580.43	6,727.03	192.30	510.18	23,009.94	.0418
Heating	...	5,184.72	106.60	...	5,291.32	.0096
Tailings disposal	4,788.57	7,024.00	2,567.15	2,443.99	16,823.71	.0306
Total	$97,022.07	$204,726.10	$7,638.40	$71,004.80	$380,391.37	$0.6910

ADDITIONS TO PLANT, BUILDINGS, AND EQUIPMENT

Cyanide mill	$17,953.94
Crushing plant, loading and discharging bins	90,407.44
Workshops and equipment	1,233.24
Surface transportation and railway siding	16,690.03
Office equipment	643.72
General buildings	2,822.06
Fire equipment	1,069.43
Medical department	3,041.42
Hoisting equipment	1,725.20
Heating equipment	10,777.81
Underground equipment	100,194.60
	$246,558.89

ADDITIONS TO PLANT, BUILDINGS, AND EQUIPMENT—*Continued*

Less construction incomplete March 31, 1929	$102,084.19
	$144,474.70
Add construction incomplete March 31, 1930	10,589.85
	$155,064.55
Less equipment and buildings sold or demolished	15,981.18
	$139,083.37

General

The volume and grade of the ore reserves were increased during the year, largely through the opening up of veins adjacent to No. 11 shaft. Results obtained from this development, as far as it has proceeded, are quite satisfactory, and warrant the expectation of continued success.

McMillan Gold Mines, Limited

This company has a capitalization of 3,000,000 shares of $1 par value. The officers and directors are: John H. Banks, president; G. A. Foot, vice-president; C. B. Goldsborough, secretary-treasurer; Dr. F. C. Fraser, E. J. McMillan, Geo. Arents, W. J. Galligan, R. L. Patterson, and F. Davison, directors. The head office is at Sudbury.

The property held by this company consists of 36 claims in Mongowin and Scadding townships, district of Sudbury.

The president's report for the year ending December 31, 1929, gives the following information:—

Up to the suspension in November, the work done in 1929 was as follows:—

	Feet
325-FOOT LEVEL:	
Drifting west of shaft	7
Drifting east of shaft	240
Crosscutting west of shaft	47
Crosscutting east of shaft	46
425-FOOT LEVEL:	
Drifting east of shaft	345
Crosscutting east of shaft	38
Winze east of shaft	10
Raises (2) east of shaft	32
DIAMOND-DRILLING:	
From surface, 4 holes	1,260
From 525-foot level, 2 holes	778

Including that prior to 1929, the total work done to date is approximately as follows:—

	Feet
Diamond-drilling (10 holes)	4,388
Sinking	560
Crosscutting	1,740
Drifting	3,480
Raising (for diamond-drill set-ups)	32

Operations were suspended in November, 1929, owing to lack of funds. E. J. McMillan was in charge of the property.

March Gold, Limited

This company has an authorized capitalization of $1,500,000, divided into shares of $1 par value each. The shares formerly had a par value of 10 cents, but the change was ratified at a meeting of shareholders held June 15, 1927. The parent company in the United States has a capitalization of $3,500,000, divided into shares of $1 par value each.

The officers of the company are: Henry Kobler, president; B. C. Conderman, vice-president; Samuel B. Darlich, secretary; F. J. C. Bull, treasurer; Bernard N. Hyman, chairman of the board. M. Knutson is manager at the property. The directors of the company are: Bernard N. Hyman, Henry Kobler, Samuel B. Darlich, Geo. R. Feine, F. J. C. Bull, Charles J. Schmidt, Henry Tiedt, Gustave Loesch, and Jacob Schwingel, all of Buffalo, N.Y., and B. C. Condeiman of Hornell, N.Y. The head office of the company is at 402 Wallbridge Building, Buffalo, N.Y., and the mine office address is Box 533, South Porcupine, Ont.

The company owns five claims in the township of Deloro, district of Cochrane. These claims comprise H.R. 823, H.R. 833, and H.R. 900 of the original March group and the Maidens-McDonald group, H.R. 832 and H.R. 926, purchased from the Coniagas Mines, Limited.

There are five shafts sunk on the property, No. 1 situated on H.R. 823 being the first sunk by the March Gold, Limited, to a depth of 800 feet. No work has been done through this shaft for several years. No. 2, an incline, 60° N., is sunk on H.R. 833 to a depth of 190 feet and is connected at the 170-foot level with No. 3, a vertical three-compartment shaft located on H.R. 833.

An inclined shaft, known as No. 4, located on H.R. 832, is sunk along No. 6 vein at 65° N. to a depth of 220 feet (vertical), the work having been done by the original holders. This shaft is now connected with No. 3, which lies 460 feet to the southwest.

A vertical shaft sunk to a depth of 115 feet on H.R. 833 is not connected with other workings of the March or Maidens-McDonald groups. The plant erected at this shaft has been dismantled.

All underground work of the past year has been confined to claims H.R. 926 and 832. The total development footage for the year ending December 31, 1929, is as follows:—

	Feet
Crosscutting	189
Drifting	1,100
Sinking winze	101

The mill operated throughout the year with a total production of $256,303.51.

There were employed at the property during the year about 85 men.

Metals Development, Limited

This company is capitalized at $2,500,000, in shares of $1 par value. There are 1,896,818 shares issued.

The following is a list of officers and directors of the company: Dr. M. H. Lebel, of Montreal, president; W. R. Salter, vice-president; M. F. Blue, secretary; H. S. Crabtree and H. Borgford, of Toronto; Auguste Decoy, Dorval; W. J. Evans and T. E. Armstrong, New Liskeard; and J. P. Sherry, Memramcook, N.B. J. W. Morrison is consulting engineer.

The company is interested in several claims in the North Clearwater lake section, district of Kenora (Patricia portion). The property is best reached from Woman lake. A fair road, about a mile in length, has been built to the camp location on claim No. 5,603.

Surface work has been done on 17 claims and has shown up several long breaks and many different geological conditions. Two systems of veins have been located.

The veins first located had a strike almost due north, but the most promising occurrence of gold is in a vein of banded quartz on claim No. 5,603, which strikes N. 47° E. and dips 50° S. Minerals found in this vein are galena, sphalerite, pyrite, some chalcopyrite, and gold.

When inspected in July, 1929, an inclined shaft had been put down on the vein to a depth of 100 feet, and 61 feet of drifting on the vein had been accomplished. This work has all been in ore of a fair grade, showing spectacular free gold in places.

The property is equipped with a Sullivan portable compressor, 125-cubic-foot capacity, gasoline driven, and a small Turbo hoist driven by the compressor. A horse whim was in process of construction in July. New camp buildings have been put up on claim No. 5,603 sufficient to house 20 men.

When inspected, 7 men were employed on the property. J. C. Nelson is manager.

Mineral Research Corporation

The company is operating on the old Davidson-Carr property located in Thunder Bay district, at the north end of Northeast bay of Sturgeon lake, about six miles by direct line east of the St. Anthony mine. The property can be reached by water from Sturgeon lake proper, or from a point on the Canadian National railway, five miles east of Savant Lake station. The route is across Buckingham lake, with a portage of a mile and a quarter into Northeast bay, and a short paddle to the mine. The winter road starts from a point on the west shore of the bay due west of the mine, and terminates five miles away at mileage 76 on the Canadian National railway, where supplies are put off for the property.

In the winter of 1928-29, a small steam plant was installed on the property and the following camp buildings were erected: headframe, 18 feet high; hoist-house and blacksmith shop combined, 12 by 20 feet; boiler-room and compressor house combined, 30 by 15 feet; office, 18 by 20 feet; bunk-house for twenty-six men, 22 by 40 feet; stable, 14 by 14 feet; and icehouse, 10 by 10 feet.

Underground operations consisted of sinking a 60-degree inclined shaft on the vein to a depth of 160 feet, and doing 30 feet of drifting on the 130-foot level and 230 feet on the 160-foot level. At the time of inspection on July 10, 1929, the mine was partially filled with water, and underground operations for the present were discontinued. A diamond-drill campaign was in progress from the surface, of which 424 feet had been done in two holes.

Three veins besides the one sunk on have been located on the surface. The vein system has a general strike of N. 45° W. and dips 60° N.

Twelve men were employed on the property. A. R. Globe is in charge of operations.

Moss Mines, Limited

This company has an authorized capital of 4,000,000 shares of $1 par value, of which 2,678,293 shares have been issued. The officers are: Norman R. Fisher, president and managing director; Alistair Fraser, vice-president; James Cooper, secretary-treasurer. The directors are: R. Blackburn, C. Z. Gzowski, F. B. Little, J. D. Paterson, and F. M. Rose.

The head office is at 75 Sparks Street, Ottawa, and the executive offices are at 132 St. James Street, Montreal.

Moss Mines, Limited, hold some 900 acres in Moss township, district of Thunder Bay, including what was known as the Huronian mine. The property is situated on Jackfish lake, and supplies are brought in from Kashabowie, 80 miles west of Fort William on the Canadian National railway, over a 26-mile route.

Underground work was carried on continouusly throughout 1929 from the new vertical three-compartment shaft, which was completed to 400 feet in 1928. Levels were opened up on the 125-, 250-, and 375-foot horizons. A total of 3,848 feet of drifting and crosscutting was accomplished during the year 1929.

Nothing tangible was done towards installing a mill, but the installation of one is planned for the near future.

The company employed an average of 29 underground and 25 surface workers during the year.

J. G. Harkness is mine superintendent.

Patricia Dent Gold Mines, Limited

This company is interested in a group of claims about four miles north of the Jackson-Manion on the west shore of Clearwater lake, district of Kenora (Patricia portion).

Two shafts have been sunk, each to a depth of 50 feet. These are on claims Nos. 4,134 and 4,135. There are many small breaks on the property, and these have been much trenched. There is camp accommodation for 20 men. When inspected in July, 1929, there were 7 men employed. The work was in charge of J. C. Dodd.

Polaris Gold Mines of Canada, Limited

This company was incorporated under the laws of Ontario on January 5, 1928, with a capitalization of 5,000,000 shares, par value $1. There are 2,660,000 shares issued, of which 2,500,000 are for property.

The officials of the company are as follows: Ralph T. Polk, president; Manley D. Davis, vice-president; Harry Thompson, secretary-treasurer; all of Detroit, Mich. W. C. Churchill, Detroit, R. F. Stibbard, Timmins, W. E. F. Paine and J. H. S. Kerr, Toronto, are directors.

The holdings of the company are: 4 claims, Nos. 13,362, 13,365, 13,363, and 13,367, in the township of Mountjoy; 6 claims due east of claim P. 13,650 in the township of Jamieson, Kamiskotia area; and 4 claims in Whitney township, previously known as the Fitzgerald veteran claims, all in the district of Cochrane.

The activities of the company have been centred for the most part on the Mountjoy claims. The company started clearing and erecting a plant on May 15, 1928, and sinking began in August.

The plant consists of a single-drum Jenckes steam hoist, 8 by 12 inches; air compressor, 250 cubic foot per minute capacity; a 3- by 8-foot air receiver; and a 70 h.p. boiler, all housed in one building, 30 by 30 feet. There is also on the property a blacksmith shop and storehouse combined, 14 by 32 feet, and an office and first-aid room combined, 12 by 16 feet. Two cottages were built for the management.

The shaft has two compartments, the hoisting compartment being 4 feet 10 inches by 4 feet 9 inches. The shaft on April 15, 1929, had reached a depth of 216 feet.

While sinking was in progress there was an average of 14 men employed on the property.

The property stopped operations on April 15, 1929. When work is again resumed it is planned to place more equipment, capable of going to 1,000 feet.

W. C. Churchill was manager until the shut-down.

Porcupine United Gold Mines, Limited

The Porcupine United Gold Mines, Limited, has an authorized capital of 1,500,000 shares of $1 par value, all of which is issued to the Porcupine United Gold Mines, Incorporated, except the qualifying shares issued to the directors.

The officers of the company are as follows: Bernard N. Hyman, president; Ray M. Stanley, vice-president; Henry Kobler, treasurer; Samuel B. Darlich, secretary; Charles Schmidt, director, all of Buffalo, N.Y. The head office is located at 330 Wallbridge Building, Buffalo, N.Y. Offices are also maintained by Colonel Newton M. Young in the Excelsior Life Building, Toronto. The mine office is at Timmins, Ont.

Porcupine United Gold Mines, Incorporated, is organized under the laws of Delaware with a capitalization of 3,500,000 shares of fully paid and non-assessable stock of the par value of $1 a share. The officers of the company are the same as those of the limited company and the following are the directors: Charles Schmidt, William Kam, Gustave Loesch, Herman Mayer, George Feine, all of Buffalo, and Mark P. Murtha, of New York. The offices are the same as those of the limited company.

The group of claims in actual development are those adjoining the Hollinger mine and formerly worked as the Rochester mine. All the work on the property is concentrated on claim No. 13,427.

The property, acquired under option late in 1928, was dewatered to the 500-foot level and sampled. Later the mine was completely dewatered to the 900-foot level, the lowest workings.

Short, narrow, high-grade veins, showing native gold, which had been previously developed by other operators and to some extent by this company, are being stoped and the ore treated in a small mill erected in the early part of 1929.

The following is a summary of the ore treatment: An ore bin of small capacity in the headframe of the shaft supplies the feed to a 10- by 7-inch jaw crusher. Passing through a small set of rolls, the ore is carried by conveyer belt to the mill and hoisted by a bucket elevator to a second mill-feed bin.

The ore is ground in a Hardinge ball mill, diameter 4½ feet, and the discharge is to two 8- by 4-foot copper amalgamating plates with blankets at the foot. The plates discharge to a Dorr drag classifier in closed circuit with the ball mill and plates. The overflow of the classifier goes to two James tables, the concentrates from which are sent to the March Gold mill for cyanidation. About 70 per cent. of the gold is caught on the plates and blankets. The mill is treating about 15 tons daily.

There are 21 men employed at the property. Jos. T. Baldwin is manager, and R. A. Vary is in charge of the mill.

Power and Mines Corporation, Limited

The officers and directors of the company during 1929 were: Sir Frederick O. W. Loomis, president; R. C. Alwin, secretary-treasurer; Granville Gilmore, R. A. Darwin, Nap. G. Kirouac, H. C. Perchard, and W. H. Perram, directors.

The authorized capital stock of the company consists of 300,000 seven per cent. cumulative preference shares, $5 par value, of which 30,000 shares have been issued, and 1,500,000 common shares of no par value, all issued.

The company operates the Grace mine, Michipicoten area, district of Algoma. Underground development work, consisting of some drifting and crosscutting on the 2nd, 3rd, and 4th levels, was carried on until March, 1929, when underground operations were discontinued and a programme of surface exploration was commenced. Underground operations were not resumed until 1930.

During 1929, a 50-ton pilot test mill, using combined amalgamation and flotation, was installed to replace the old California stamp battery, which was in commission nearly thirty years ago.

An average of 30 men was employed, 12 underground and 18 on surface. J. A. S. Roussac was succeeded by C. A. Chisholm as manager of the property. Operations were suspended in the spring of 1930 due to lack of finances.

The head office is at 1254 St. Catherine Street West, Montreal.

Ridgedome Mines, Limited

Ridgedome Mines, Limited, has a capitalization of 3,000,000 shares of $1 par value, of which 1,870,515 shares have been issued. The following is a list of the officers and directors: D'Arcy D. Bogue, president and treasurer; Ernest Dussault, vice-president; James E. Bogue, secretary; Arthur Bethiaume and E. H. Rayner, directors. The head office is at 104 St. James Street, Montreal.

The company is interested in 16 claims in Ogden township and 17 claims in Fripp township, all in the Porcupine mining area. Operations during 1929 were all carried out on the Ogden property, some 5½ miles south of Timmins.

A small mining plant consisting of a Jenckes hoist, 6 by 8 feet, a two-drill Alley McLellan air compressor, and a 50 h.p. locomotive-type boiler was installed in the early summer. Sinking commenced in August, the shaft being put down past the 125-foot horizon and a level started. About 70 feet of crosscutting was done, cutting the vein about 20 feet from the shaft. A small amount of drifting was also accomplished. The shaft is situated on claim T.R.S. 1,178. Considerable trenching has been done on claims P. 13,934 and 13,935. Underground work was discontinued in the winter, and a diamond-drill programme started. Eight men were employed on the property at underground work. C. J. B. Armstrong is in charge of operations.

Ritchie Gold Mines, Limited

Ritchie Gold Mines, Limited, has a capital of 3,000,000 shares of $1 par value. The officers and directors of the company are: O. E. Earle, president; J. J. Byrne, vice-president and managing director; G. M. Hagen, secretary-treasurer; A. P. Earle and T. J. Day. The head office is at Room 607, 11 King Street West, Toronto. The property is situated in Gauthier township, district of Timiskaming.

The following work was done during the year: sinking, 528 feet; stations, 81 feet; crosscutting, 698.7 feet; drifting, 444.5 feet; and diamond-drilling, 2,000 feet. The mine closed in December, 1929.

On an average, 15 men were employed during the year.

St. Anthony Gold Mines, Limited

The St. Anthony Gold Mines, Limited, is capitalized at $3,000,000 in shares of $1 par value, 1,757,252 of which have been issued.

The officers of the company are: A. E. Matthews, president; T. S. Giles, secretary; A. S. Dickson, treasurer; R. W. Brigstocke, A. R. Osborne, T. Magladery, W. F. Jamieson, and G. W. Ecclestone are directors. The head office is in the Toronto General Trusts Building, Toronto, and the mine office address is Savant Lake, Ont.

The company holds 11 claims, H.W. 744-46, B.G. 151-54, H.W. 699, S.V. 415, S.V. 396 (power site), and B.G. 168, in the Thunder Bay district, Sturgeon lake area. It is also interested in 45 claims in Montbray township, Quebec.

The Sturgeon lake property was first worked about 1900, and as early as 1902 two shafts, each 100 feet deep, had been sunk and considerable open cut work done. It was in active operation and produced until 1908. The most recent attempt at operation was made in 1917 when the Kerr Lake Mining Company of Cobalt did 1,500 feet of drifting and crosscutting and 250 feet of raising and sinking. The mill was also run for a short time for sampling purposes at this time.

There are five levels, and stoping has been done on the four upper ones. The deepest working is the 500-foot horizon.

The present company started work on the property on October 14, 1928, doing 3,000 feet of diamond-drilling from surface. After the freeze-up

45 car loads of supplies, mostly coal, were freighted to the mine by tractors from Savant Lake station on the Canadian National railway, a haul of about 12 miles.

Early in the new year the dewatering of the shaft and workings started and was completed in May, by which time the old upper workings had been completely sampled.

At the time of inspection in July, 1929, the mill was nearly ready to operate. The mill is of an early design, and it is expected that a cyanide unit will be added, with a view to making a better recovery than former operators and also to treating the old tailing dump. This dump is supposed to contain 30,000 tons of $3.50 grade.

The mine is reached in summer by a 3½-mile road from Savant Lake to the north end of Sturgeon lake and from there by water for about 8½ miles. The company at present operates a 36-foot motor launch on Sturgeon lake. The route is the same in winter.

There were at the time of inspection 33 men on the payroll. H. A. Swart is superintendent at the property.

Sylvanite Gold Mines, Limited

Sylvanite Gold Mines, Limited, has an authorized capital of 3,300,000 shares of $1 par value. The officers and directors of the company are: Edward L. Koons, president; William L. Marcy, vice-president; Clark L. Ingham, treasurer; Welles V. Moot, managing director; Ralph Hochstetter, Oliver Cabana, and James Y. Murdoch, directors. W. S. Walton is secretary, with offices at 603 Royal Bank Building, Toronto. C. E. Rodgers is general manager, with a working force of 220 men. The property is situated in the township of Teck, district of Timiskaming.

The general manager's report for the fiscal year ending March 31, 1930, is as follows:—

Production

During the period, 75,408 tons of ore were milled with bullion recovery of $690,400.14, or an average recovery per ton milled of $9.16. The mill ran 97.3 per cent. of the possible time and treated an average of 206.7 tons per day.

It will be noted that recovery per ton was below last year's average. This is chiefly accounted for by the proportionately large increase in development rock sent to the mill.

Mining

The tonnage of ore broken in stoping amounted to 67,919, while ore coming from development was 17,664, making a total of 85,583 tons for the year. Waste broken was 29,794 tons; of this, 23,754 tons was hoisted to surface. Included in the total waste was 18,668 tons from, and immediately surrounding, No. 4 shaft.

The estimated tonnage of broken ore in stopes on March 31 was 55,807. An additional 6,528 tons remained on the surface dump, giving a total of 62,335 tons.

Development and Exploration

Claim L. 2,101.—Sinking of the two-compartment No. 4 shaft was started May 17, 1929, and at the end of last March it had reached a depth of 1,480 feet, thus showing an average advance per month of 140 feet. In addition, two sumps, one double, and nine single stations were completed, and another station was just started. Rock excavations from these sumps and stations amounted to 24,534 cubic feet.

An enclosed headframe, waste disposal trestle, and hoist-house were constructed, and a 4- by 4-foot double-drum electric hoist, suitable for work to approximately 2,000 feet, was installed. The shaft was also completely timbered and lined to 1,450 feet, and counterbalance and cage guides were installed to the 1,250-foot elevation, thus permitting operation of the surface hoist to this point.

During the previous year certain stoping had been done above 850 feet, almost to the next level, but as this work interfered somewhat with early shaft-sinking it was temporarily suspended. Later, when sinking was resumed below 1,000 feet, exploration was started on the 700-, 600-, and 500-foot levels in the order named. In addition to diamond-drilling, drifting, and crosscutting, a combined manway and ore pass system was driven. This, commencing from No. 850 stope, was completed to a point 25 feet above the 600-foot level and permits disposal of ore directed by gravity to 1,000 feet, where electric haulage connects with No. 2 shaft.

Above 1,000 feet in the No. 4 shaft area, exploration done since sinking commenced has indicated encouraging occurrences of ore. This, coupled with results of previous diamond-drilling, leads to the reasonable expectation of eventually developing a tonnage of importance there.

Below that level, no work has yet been undertaken aside from shaft-sinking and the cutting of stations, in addition to promising diamond-drill intersections secured before the shaft was started. The shaft itself cut two separate veins between the 1,000- and the 1,250-foot horizon, and sampling of the walls indicated ore in both. Shaft-sinking also exposed what is apparently a strong fault in this section. The displacement is to the north on the lower side, thus tending to carry the ore in that direction. This fault and the probable existence of another vein likely accounts for the assumed position on the 1,500- and 1,750-foot levels of what is indicated as being a large ore body lying north of a point vertically below the 800-foot level ore.

During the past few months a daily average of 50 tons has gone to the mill from this area of the mine.

Claims L. 2,100, L. 2,226, and L. 2,227.—Two of the most important developments were ore extensions from the No. 1,001 vein system at and above the 1,000-foot level, east of No. 2 shaft, and the continuation of Nos. 1,004, 1,023, 1,056, and 1,058 vein series above 1,000 feet. An area of exceptional promise was also partially developed on Nos. 1,024, 1,056, and 1,058 ore bodies above the 1,125-foot level, after crosscutting north from No. 2 shaft at that depth.

Mill ore continued to be drawn from the No. 1,001 vein section, that just south of No. 2 shaft, on practically all levels from approximately the 400- to and including the 1,750-foot. This part of the mine produced a large tonnage of better than average grade during the year.

On the 1,750-foot level, in what is designated as No. 1,711-12 vein, the work indicated one continuous ore section 150 feet in length, and box-holes have recently been started there in preparation for stoping. As yet this ore has not been traced to 2,000 feet. A diamond-drill hole on the 2,000-foot level has, however, indicated the probability of the downward continuation of what may be this same vein.

Another working place on the 1,750-foot level, namely No. 1,707-8, is now ready for stoping over two sections having a combined length of 285 feet. This vein lies about 100 feet south of No. 2 shaft.

Diamond-drill indications between 2,000 and approximately 2,500 feet, as well as crosscutting, drifting, and diamond-drilling from the 1,500- to the 2,000-foot level, shows that below 2,000 feet the so-called main south vein fracture dips to the north at about 70 degrees. Exploration to the end of the fiscal year disclosed no consistent ore of probable importance along this major fracture below approximately 1,650 feet. Certain favourable ore indications and short occurrences of ore were, however, indicated below that level. Promising structure was also found in many sections. This, added to the fact that the fracture is better defined and the vein material is on an average wider and of greater known extent than any other thus far disclosed on your property, leads to the belief that ore possibilities exist at greater depth. On this assumption diamond-drilling is planned below 2,500 feet.

Diamond-Drilling

One drill operating continuously and a second machine working part time completed a total of 13,998 feet. Results fully justified the expenditure for this method of prospecting.

To summarize the approximate 14,000 feet of work of this class completed, it can be said with confidence that diamond-drilling contributed largely to the success for the year. It was wholly responsible for the finding of certain ore bodies. It also very materially aided discovery and development of ore in Nos. 1,065 and 1,126 areas, as well as numerous other sections of less probable tonnage and value. In addition, drilling from the 500-foot level near No. 2 shaft has indicated the existence of two steeply inclined veins on claim L. 2,226. One appears to be narrow and high grade; the other shows a greater than average width, good structure, and normal values. A hole is now being drilled on the 400-foot level, and further exploratory work is planned, as it is reasonable to believe this vein system may be the eastward continuation of valuable ore occurrences being developed farther to the west at the same horizon, as well as in No. 1,004 stope almost vertically below these intersections.

DEVELOPMENT AND EXPLORATION FOOTAGES

	Feet
Drifting	4,121
Crosscutting	1,951
Raising	488
Raise stations, sublevel drifts, and diamond-drill stations	711
Box-holes	1,228
Box-hole pillar drifts	827
Stope winzes	70
Shaft-sinking	1,480
Total	10,876
Diamond-drilling	13,998
	cu. ft.
Shaft stations and sumps	24,534

Reducing the shaft-sinking, station-cutting, and sump excavation work to an equivalent drift footage, based on cubic feet of material broken, we have for the year what would be equal to a total of 13,123 feet of advance. This is exclusive of diamond-drilling.

OPERATING COSTS

	Expense	Per ton milled
Development and exploration	$206,426.48	$2.738
Mining	236,501.18	3.136
Milling	100,570.17	1.334
General charges	50,176.06	.665
Administrative charges	19,756.45	.262
Total	$613,430.34	$8.135

In arriving at a reasonably accurate conclusion of what has been accomplished during the year, the following points should be considered: To the net operating profit of $26,694.29, shown on the balance sheet, should be added the proportion of shaft-sinking charged directly to operation (from which as yet it has been possible to derive but small benefit) and the profit available from the increase in broken ore. These three items combined represent a total of approximately $93,000.00. A further abnormal expenditure, charged entirely to operation, was an amount of $40,790.59 for diamond-drilling.

The total cost of electric power for the year was $71,625.97. This is equivalent to 95 cents per ton milled, or $77.42 per horse-power consumed. It will thus be very evident that this continued and unwarranted high power charge very seriously affects net revenue. Nor do present conditions appear to offer any immediate possibility of much, if any, relief at properties in this district using less than 5,000 h.p.

New Buildings and Equipment

Two company residences and a storehouse were moved to new locations and slightly remodelled; a small office addition was made to the machine shop; a 32- by 36-foot hoist building and a suitable headframe were erected at No. 4 shaft, and a 5,500-foot tailing disposal system was constructed and put in operation from the mill to the northeast section of Kirkland lake.

Equipment installed during the year included a vibrating screen and an elevator placed in the crusher station in closed circuit with the rolls; a lathe, shaper, pipe machine, power drill, etc., added to the machine shop; and an automatic stoker put in to feed fuel to the heating boiler.

Tashota Gold Mines, Limited

The authorized capital of this company was increased during 1929 from 2,000,000 shares to 4,000,000 shares of $1 par value.

The officials of the company are: H. H. Vaughan, president; R. M. Davy, vice-president; P. W. Ogden, secretary-treasurer. The directors are: H. H. Vaughan, R. M. Davy, L. Soliague, E. E. Campbell, F. C. Shorey, Dr. J. Bonsall Porter, and R. W. Norrington. The head office is at Room 602, 1111 Beaver Hall Hill, Montreal.

The property held by the Tashota Gold Mines, Limited, consists of 8 claims in the Tashota area, district of Thunder Bay, and 21 claims in the Boston Creek area, McElroy township, district of Timiskaming.

Underground operations were started on the Tashota area claims in 1928, a shaft was sunk to a depth of 235 feet, and levels were opened up at the 100- and 200-foot horizons. In February, 1929, underground work was suspended and a surface diamond-drill campaign started. Work was resumed underground in September and carried on for the remainder of the year.

Development during 1929 consisted of 542 feet of drifting and crosscutting and 5,282 feet of diamond-drilling.

An average of 18 men was employed, 8 underground and 10 on the surface. W. A. Coughlin was manager of the property

The annual report of the company gives the following balance sheet as at December 31, 1929:—

ASSETS

CURRENT:		
Cash in bank	$2,910.02	
Supplies	2,020.05	
		$4,930.07
FIXED:		
Mining claims and options at cost	$728,050.00	
Plant, machinery, equipment, and buildings	34,672.42	
		762,722.42
DEFERRED CHARGES:		
Development and organization expense	$173,587.70	
Discount on shares	936,054.10	
Prepaid insurance, etc.	322.26	
		1,109,964.06
		$1,877,616.55

NOTE.—The company holds a contract from Stobie Forlong and Company, Limited, for the purchase of 752,425 shares of the company's capital stock, with a balance of 555,759 shares yet to be taken up.

LIABILITIES

CURRENT:			
Accounts payable			$6,681.55
CAPITAL:			
Authorized, 4,000,000 shares of $1 each		$4,000,000.00	
Subscribed and fully paid, 1,867,535 shares of $1 each		1,867,535.00	
Subscribed and not fully paid, 4,000 shares of $1 each	$4,000.00		
Less subscriptions unpaid	600.00		
		3,400.00	
			1,870,935.00
			$1,877,616.55

Teck-Hughes Gold Mines, Limited

Teck-Hughes Gold Mines, Limited, has an issued capital of 4,467,144 shares of $1 par value. The officers and directors of the company are: Charles L. Denison, president; Albert W. Johnston, vice-president; George C. Miller, secretary; Wm. C. Himrod, treasurer; K. P. Emmons, assistant treasurer; Robert W. Pomeroy, J. F. Thompson, Conrad E. Wettlaufer, and W. W. Reilley, directors. D. L. H. Forbes is general manager, and 625 men are employed at the mine in Leck township.

The report of the general manager for the fiscal year ending August 1, 1929, is as follows:—

During this period 331,150 tons of ore were treated, and bullion amounting to $4,889,127.32, or $14.764 per ton, was recovered. This recovery is equivalent to 236,511.587 ounces of gold, or 0.7142 ounces of gold per ton of ore. The gross revenue was $4,980,339.47, or $15.039 per ton. The total direct operating cost was $1,961,811.17, or $5.924 per ton. Depreciation written off on buildings and plant amounted to $215,944.98, or $0.652 per ton, making the total of direct and indirect charges $2,177,756.15, or $6.576 per ton. After making a provision of $259,065.32 for federal and provincial taxes, the net surplus was $2,543,518.00.

The following is a statement of operating costs:—

	Total cost	Cost per ton of ore treated	Cost per ounce of gold produced
Development and exploration	$382,632.86	$1.155	$1.618
Mining	894,917.56	2.702	3.784
Milling	457,177.60	1.381	1.933
General expense	227,083.15	.686	.960
Total direct charges	$1,961,811.17	$5.924	$8.295
Depreciation	215,944.98	.652	.913
Total direct and indirect charges	$2,177,756.15	$6.576	$9.208

Included in the above operating costs is the sum of $234,408.67 paid to the Northern Ontario Power Company, Limited, for an average monthly power demand of 3,932 horse-power. This is equivalent to a charge of $59.62 per horse-power year.

Construction work charged to capital account absorbed $180,802.11, practically all of which was expended on surface equipment and buildings for South shaft. By the end of the fiscal year this construction work was all completed and South shaft sunk to a depth of 1,422 feet.

Central shaft was sunk from the 19th to the 25th level and completely equipped for the handling of ore and waste from all six of the new levels as well as for the crushing and skip-loading of ore coming from levels below the 13th down to the 19th.

A total development footage of 8,522.9 was accomplished during the year, and the combined total length of all mine workings at August 31 came to 65,143.6 feet. Classified under the usual headings the work done was as follows:—

	Feet
Drifting	3,022.3
Crosscutting and shaft stations	1,375.7
Raising	2,118
Shaft-sinking	2,006.9
Total	8,522.9

Diamond-drilling amounted to 11,450.7 feet.

New ore was found on the 6th, 7th, 10th, 15th, 20th, 21st, and 25th levels. Although drifting along the ore zone on new levels below the 19th had proceeded only short distances and only on the 20th, 21st, 22nd, and 25th levels by the end of the fiscal year, a total ore length of over 800 feet had been opened up on these levels and the conditions of ore deposition had been proved to be similar to those on upper levels. The average width of the ore zone on the new levels was found to correspond with the average width on other levels, while satisfactory indications of ore bodies, of excellent grades and good stoping widths, were obtained from crosscuts and drill-holes. The opening up of the 20th and 21st levels is being attended to first and will be followed by a gradual development of the 22nd, 23rd, 24th, and 25th levels along with the sinking of Central shaft extension three-compartment winze from the 25th to the 30th level. This work is planned for completion by the time the South shaft will have reached the 30th level and be ready for connection with Central shaft workings.

Development work produced 11,363 tons of ore that was treated in the mills and 58,250 tons of waste rock that was dumped on surface.

While the year's programme of underground work was in the nature rather of preparation for deep mining and possible further expansions than of finding new ore, we were abl at the same time to develop sufficient new ore to replace the tonnage extracted and to leave the reserves of blocked and broken ore undiminished at the end of the year.

Telluride Gold Mines of Canada, Limited

Telluride Gold Mines of Canada, Limited, owns the south half of lots 10 and 11, concession II, Skead township, district of Timiskaming. The company has a capital of 2,000,000 shares of $1 par value. The officers and directors are: D. M. Gilpin, president; L. L. Brennan, secretary; D. B. Gilpin and Dr. Geo. W. Rogers, directors. H. Hollands-Hurst is consulting engineer. An average of 35 men was employed until the mine closed in November, 1929.

Work completed in 1929 was as follows: A transmission line was cut from the Gold Hill Mines, Boston Creek, to the Telluride property, a distance of 5½ miles; all the poles except fifty were erected. Three 100 k.v.a. Ferranti transformers were installed with switch-house complete. A 50-ton concentrator (amalgamation and flotation) was designed and built by South Western Engineering Corporation, of Los Angeles, California. An office and a bunk-house to accommodate 50 men were under construction when the mine closed. The lateral work underground consisted of:—

Level	Feet
90-foot	45
150-foot	425
250-foot	1,525
350-foot	station only

A station was slashed out on the 250-foot level, 350 feet west of the old shaft, to start raising a new shaft.

Trethewey-Ossian Mines, Limited

Trethewey-Ossian Mines, Limited, operated their property in Pacaud township, district of Timiskaming, during 1929 from August 1 to October 5, with a working force of from 15 to 20 men. J. L. Trethewey is president; T. C. Glenn, treasurer; and J. Torrance, director.

A shaft was sunk 140 feet, and 90 feet of drifting and 77 feet of cross-cutting was done on the 125-foot level.

The following buildings were built on the surface: bunk-house, 34 by 20 feet; cook-house, 40 by 16 feet; office, 16 by 16 feet; blacksmith shop, 20 by 16 feet; power-house, 24 by 20 feet.

Sidney A. Pain was manager.

United Mineral Lands Corporation

This company is a consolidation of the interests of the Premier Paymaster Mines Company, the United Mineral Lands, Limited, and the Porcupine Paymaster Mines, Limited. The holdings of the Canadian company are in Deloro township, district of Cochrane, and comprise ground formerly owned by the Standard Gold Mines, Limited, and the McLean Gold Mines, Limited, the claims lying along the north border of Deloro township.

During the year ending December 31, 1928, the following underground work was done on the Paymaster property:—

Level	Diamond-drilling	Drifting	Raising
	feet	feet	feet
100-foot	185	247	....
200-foot	....	17	....
300-foot	4,016	764	125
400-foot	....	413	17
600-foot	....	246	....
800-foot	2,693	742	....
Total	6,894	2,430	143

On the 425-foot level of the adjoining Ankerite mine, 21 feet of cross-cutting and 502 feet of drifting were done. This work lies for the most part on the company's property.

During the year the new concentrator was put in operation but not thoroughly tested before the company ceased active work in November.

A small staff of underground men continued development by drifting and diamond-drilling throughout the remainder of 1928 and well into 1929. Since early summer, 1929, no work other than pumping has been done on the property. M. Donovan is mine manager, and from 15 to 30 men have been employed since the curtailing of the work.

Vipond Consolidated Mines, Limited

The authorized capital of this company is $2,500,000, divided into shares of $1 par value, of which 2,250,000 are issued.

The officers of the company are: F. H. Hamilton, president; John H. Black, vice-president; J. Ingram, secretary. The directors are: F. H. Hamilton, John H. Black, W. H. Stafford, R. T. Shillington, Sir A. Hamilton Grant, A. S. Hamilton, E. Turk. Robert E. Dye is manager.

The head office of the company is located at Suite 1206, Star Building, 80 King Street West, Toronto. The mine office is at Timmins.

The company owns 320 acres in mining claims and controls 889.612 shares of the 1,150,000 issued in the Inspiration property (3 claims), both this and the Vipond holdings proper lying in the southwest portion of the township of Tisdale, district of Cochrane. Together with these, the Vipond company has a three-quarter interest in the Ridgeley claims (6 in number), lying immediately east of the Coniaurum.

The balance sheet for the year ending July 31, 1929, is given in the seventh annual report of the company as follows:—

ASSETS

CAPITAL:		
Mining claims and properties, as per balance sheet, July 31, 1924	$1,432,442.84	
Acquired during year ended July 31, 1927, from British Porcupine Mines, Limited, less subsequent adjustments	213,149.19	
		$1,645,592.03
Mine, mill, camp and office buildings, plant machinery and equipment, as appraised July 31, 1924	$301,240.87	
Additions at cost to July 31, 1928, including British Porcupine Mines, Limited	154,337.87	
Additions at cost for year ended July 31, 1929	18,666.51	
		474,245.25
Shares in other companies at cost		117,540.27
		$2,237,377.55
CURRENT:		
Cash on hand and in banks	$53,474.91	
Provincial and railway bonds at cost (market value $526,000)	537,584.60	
Bullion en route and on hand	57,851.71	
Accounts and interest receivable	6,829.65	
Mining and milling supplies	30,225.81	
		685,966.68
DEFERRED:		
Insurance and other prepayments	$13,928.69	
Syndicate participations and deferred expenditures on outside properties	11,410.86	
		25,339.55
		$2,948,683.78

LIABILITIES

CAPITAL:		
Capital stock authorized (2,500,000 shares at $1 per share) issued and outstanding	$2,250,000.00	
Surplus	357,840.33	
		$2,607,840.33
CURRENT:		
Accounts and wages payable	$37,803.13	
Accrued charges	6,941.53	
		44,744.66
RESERVES:		
Reserve for depreciation of buildings, plant, and machinery	$279,311.70	
Reserve for Dominion income and provincial production taxes	16,787.09	
		296,098.79
		$2,948,683.78

The operating account for the year ending July 31, 1929, shows the following:—

EXPENDITURE

Development	$107,124.39
Mining, including hoisting	196,773.96
Crushing, conveying and milling	121,132.42
Shipping and marketing bullion	5,201.39
General camp maintenance	12,222.83
Administration and general expense, mine	20,655.61
Administration and general expense, Toronto office	7,961.52
Transfer, legal, and directors' fees, etc	17,731.70
Insurance, including compensation	20,349.98
Provincial and municipal taxes	8,387.07
Balance carried down	300,544.14
	$818,085.01

REVENUE

Bullion proceeds, plus exchange	$797,113.78
Bond and bank interest earned	20,971.23
	$818,085.01

The profit and loss appropriation account for the year ending July 31, 1929, is as follows:—

DEBIT

Examination expenditures on outside properties written off	$6,419.19
Reserved for depreciation of buildings, plant, and machinery	61,190.62
Reserved for Dominion income taxes	10,168.20
Surplus July 31, 1929, carried to balance sheet	357,840.33
	$435,618.34

CREDIT

Surplus July 31, 1928	$135,019.80
Sundry adjustments	54.40
Balance brought down	300,544.14
	$435,618.34

During the period ending July 31, 1929, 100,540 tons of ore were hoisted, of an average grade of $7.93 per ton, and produced bullion to the value of $797,113.78. The cost per ton milled during this period was $5.15 as against $5.44 for the same period last year.

The following report on operations at the mine is taken from the annual report of the manager, Robt. E. Dye:—

Results of Development

During the fiscal year under review, active exploration and development work was conducted in various parts of the property. Fair results were obtained in several places, but by far the most important developments of the year took place in the No. 709 drift area on No. 9 vein southeast of the Central system. In this area a productive zone was encountered extending from the 866-foot level up to the 400-foot horizon. An ultimate production of approximately $1,000,000 in ore of $9 per ton grade is now assured from this section with chances of extending the present known limits of the ore zone.

Work in the northern part of the property at the 400-foot level has recently come into an ore occurrence which, it seems certain, is a continuation of some of the southerly Hollinger veins. At the time of writing, October 30, an ore section is exposed at the 400-foot level for a length of 175 feet, which assays in excess of $7 per ton over an average width of 110 inches. The area is now being investigated at the 500-foot level by means of a crosscut. This very considerable body of indicated ore was not taken into account in arriving at the ore reserves estimate presented herewith.

Summary of Underground Operations

During the fiscal year ended July 31, 1929, the following development work was done:—

Operation	Feet	Total cost	Cost per foot
Drifting and crosscutting	6,243	$77,421.53	$12.40
Raising	473	8,665.98	18.31
Diamond-drilling, underground	8,113	14,558.96	1.79

Some 100,259 tons of ore was hoisted, of which 88,733 tons was taken from the stopes. The cost of ore delivered to the primary crushing plant averaged $1.97 per ton.

The Mill

The mill operated continuously during the year and the following results were obtained:—

Tons milled	100,540
Average value per ton	$8.63
Gross value	$867,749.38
Bullion recovered	$797,113.78
Average running time ... per cent.	95.5

Production

From bullion produced during the year	$797,113.78
From bullion produced during former years	3,688,216.90
	$4,485,330.68

The above figures do not include bullion produced by the Porcupine Crown before this property was acquired by the company.

COST OF PRODUCTION

	Total cost	Cost per ton
Development	$107,124.39	$1.07
Ore extraction	196,773.96	1.96
Crushing, conveying, and milling	121,132.42	1.20
Shipping and marketing bullion	5,201.39	.05
General camp maintenance	12,222.83	.12
Administration at mine	20,655.61	.21
Head office expense	7,961.52	.08
Corporate expense	17,731.70	.18
Taxes	8,387.07	.08
Insurance	20,349.98	.20
Total	$517,540.87	$5.15

Ore Reserves

As at July 31, 1929, the ore reserves were estimated at 127,500 tons of an average value of $8.16 per ton, or a total gross value of $1,040,000. This represents an increase of 10,600 tons and of $150,000 in gross value over the corresponding figures for the previous year.

During the period covered by this report, a total of 100,259 tons of ore of a gross value of approximately $868,000 was extracted. It will be seen, therefore, that the ore developed during the year amounted to approximately 110,800 tons of ore of an estimated gross value of $1,018,000. These figures do not make any allowance for the ore section recently exposed at the 400-foot level in the northern part of the property, from which a considerable tonnage of ore is already assured.

West Dome Lake Gold Mines, Limited

This company has an authorized capital of 7,000,000 shares of no par value. All the undertakings of the Consolidated West Dome Lake Mines, Limited, were taken over by this company on incorporation for a consideration of 3,500,000 fully paid shares of no par value. Of the shares remaining in the treasury, 403,895 shares were taken up by the shareholders at 10 cents under the offering made June 18, 1927; 667,000 shares were subscribed for by the directors at 15 cents; 10 shares were issued to the incorporators; and 300,000 shares were sold under an underwriting arranged by the directors. The balance of unsubscribed shares in the treasury on December 31, 1927, was 2,129,095.

The holdings of the company consist of 8 mining claims and a fraction of the Ritchie veteran claim situated in the southeastern portion of the township of Tisdale, district of Cochrane, adjoining the property of the Dome Mines, Limited, on the west.

The officers of the company are: Sir Henry Pellatt, president; Wm. H. Kinch, vice-president; F. L. Hutchinson, secretary-treasurer; D. M. McPhail, manager. The directors of the company are: Sir Henry Pellatt, M. P. Van Der Voort, R. L. Baker, Toronto; Wm. A. Taylor, A. A. McKelvie, F. L. Hutchinson, New Liskeard, Ont.; and Wm. H. Kinch, Buffalo, N.Y.

The report to the shareholders for the period ending December 31, 1928, contained the following from the president's letter:—

> The mill was not operated during 1928, but was started in January, 1929, when development had reached the 1,325-foot level and, as a result of the improvements carried out, has been treating an increased tonnage very efficiently. Unfortunately the grade of ore treated has been lower than we anticipated. This has been due to irregularities and narrowing of the veins as

stoping has proceeded, causing dilution; also results to date from development on the 1,325-foot level have been disappointing. While good values have been obtained in short sections on this level, the vein widths have been too narrow to make ore. On this level we are evidently working on a lean horizon. This has occurred before on upper levels, but at present we lack money to carry development to deeper and possibly more favourable ground.

The mine has not been meeting operating expenses since the mill was started, and the company lacks development capital. The share offering made to shareholders with the report issued December 1, 1928, was subscribed only to a very small extent. It is not possible to sell the remaining treasury shares on the present basis, and some form of reorganization is therefore necessary if development is to continue and if the excellent chances which the company has in some sections of its property are to be tested. The eastern section, in particular, where vein widths are much better and the geology highly favourable, warrants more exploration. So far, work has necessarily been confined to one level in that section.

You will find enclosed with this report, notice of the annual general meeting and of a special general meeting called to consider a by-law covering a proposed reorganization of the company. The reorganization provides for the formation of a new company with a capital of 3,500,000 shares of no par value and the sale to such new company of all the assets and undertakings of this company for 1,500,000 shares, being equal to one share for each four shares of this company now issued. This would leave 2,000,000 shares in the treasury of the new company.

The following statements are from the report of the manager:—

Mining

Development and exploration work during the year was as follows:—

Level	Drifting	Cross-cutting	Raising	Sinking	Slashing
	feet	feet	feet	feet	feet
1,050-foot	1,371½	567½	100		281½
1,050-foot sub	16	17			
1,200-foot	878½	73½	166	136½	71
1,325-foot	4½	35			6
Total	2,270½	693	266	136½	358½

In addition to the above, a station, 13 by 11 by 10 feet, was cut at the 1,325-foot level.

Development

Development work underground was confined to drifting east and crosscutting north on the 1,050-foot level and drifting east on the 1,200-foot level. A raise was put through from the 1,200-foot level to the 1,050-foot level and then continued by sinking from the 1,200- to the 1,325-foot level.

On the 1,200-foot level a total length of 630 feet of ore was developed, namely "B" and "C" lenses. The "B" lens contained a length of 246½ feet by 3.66 feet in width, average grade $15.33. The "C" lens contained a total length of 383½ feet divided into three sections as follows: No. 1 section, 231 feet by 2.5 feet wide, average grade $5.12; No. 2 section, 127½ feet by 2.63 feet wide, average grade $8.26; No. 3 section, 25 feet by 2.5 feet wide, average grade $6.88.

On the 1,050-foot level drifting was carried east for a distance of 2,800 feet from the Main shaft and considerable exploration carried on by crosscutting, short drifts, and raises. In this easterly section a length of over 450 feet of low-grade ore was developed in three shoots. In places this ore is from 15 to 20 feet wide, and in my opinion this section warrants a great deal more development.

The mill was started on January 18, 1929, and continued operations until January, 1930, during which time production amounted to $179,164.64. Development during this period was: drifting, 480 feet; crosscutting, 61 feet; raising, 263 feet. The mine was closed down on January 19, 1930, except for pumping.

Negotiations are being made with United Mineral Lands, Limited, regarding an amalgamation of the two companies.

Wright-Hargreaves Mines, Limited

Wright-Hargreaves Mines, Limited, has an authorized capital of 5,500,000 shares of no par value. The officers and directors are: Oliver Cabana, Jr., president; W. H. Wright, vice-president; Gerald F. Miller, treasurer; Edwin Lang Miller, secretary and managing director; James Y. Murdoch, Oliver G. Donaldson, directors.

M. W. Summerhayes is general manager, and 425 men are employed. The report of the general manager for the year 1929 is as follows:—

During this period 188,238 tons of ore were treated in the mill, producing $1,741,872.74 in bullion. This is a recovery of $9.25 per ton treated.

ANALYSIS OF OPERATING COSTS

	Total	Cost per ton milled
Development and exploration	$363,416.51	$1.930
Stoping	345,430.96	1.835
Transporting ore (hoisting, etc.)	203,040.31	1.079
Milling charges	233,602.61	1.241
Marketing bullion	12,151.55	.065
New road construction and general surface	7,220.31	.038
Stock transfer and registrar charges	3,655.15	.019
General and undistributed charges (storehouse, maintenance, mine buildings, administration and management, property taxes, insurance, interest and exchange, legal expenses, contributions and miscellaneous)	112,379.44	.597
Depreciation plant and equipment	45,134.28	.240
Total	$1,326,031.12	$7.044

SUMMARY OF DEVELOPMENT AND EXPLORATION
December 31, 1929

	Drifting	Shaft-sinking	Cross-cutting	Raising	Diamond-drilling
	feet	feet	feet	feet	feet
December 31, 1928	44,240.5	4,456	7,378	....	28,384.5
Fiscal year	17,218.75	249	4,922.9	942	9,678
December 31, 1929	61,459.25	4,705	12,300.9	942	38,062.5

PRODUCTION RECORD, 1921-29

Year	Tons milled	Bullion produced	Value per ton
1921	36,081	$468,665	$13.00
1922	66,181	762,752	11.52
1923	79,242	754,978	9.52
1924	84,487	1,088,725	12.89
1925	147,939	1,913,401	12.93
1926	153,392	2,150,844	14.02
1927	209,164	2,151,916	10.51
1928	256,331	1,845,923	7.20
1929	188,238	1,741,872	9.25
Total	1,221,055	$12,879,076	$10.55

Construction work and betterments charged to capital account consumed $60,000. This included three new agitators in the mill, a new low-pressure compressor, various new equipment in the mine, assay office, and on the surface.

In May, a study of the available ore reserves together with the results of current developments, made it desirable to curtail production until reserves could again be built up to such proportions that the old milling scale might be resumed. At this time it was thought necessary to use every available resource in the development of new ore, and at the same time it was estimated that the smaller scale production would meet all expenses. This estimate was more than met.

During the last half year the mine has responded generously to the development programme. The available reserves have been increased to such a point that your management feels confident of its ability to maintain the present production of about 550 tons per day during the coming year. It has been fully realized that with a mill already built and paid for, it is good business to keep the tonnage as high as possible, limited only by the economic capacity of the mine to produce the ore in the most profitable manner.

The better grade of ore milled during the latter half of the year is due not alone to the better grade of ore developed, but also to a change in the mining methods whereby much of the dilution found unavoidable in the many stopes using the "shrinkage" method is being eliminated.

Two timbering methods of mining ore bodies with poor walls have been put into practice with success, stull stopes and square set stopes. These methods will be further enlarged on during the coming year.

There are now being developed on the property three vein systems, the old North and South systems with what is called the "incline" vein system. This latter was first discovered on the 1,250-foot level during 1928 and has been opened up this year on four new levels, 1,470 feet of ore having been developed on this vein during the year.

The grade of ore coming from these exposures is above the average grade of the run of mine. These ore bodies, with a dip of sometimes only 45 degrees, have a weak hanging wall and cannot be successfully mined by the old "shrinkage" method, the dilution becoming excessive.

On the No. 1 or North vein system, excellent ore has been opened up on the 1,375-, 1,500-, and 1,750-foot levels on sections of the old Middle claim ore shoot, which had been faulted. These sections aided very materially to maintain production during the shortage period as they were quickly made available for mining.

On the East claim a new ore body was developed on the 700-foot level of the North vein system. A length of 600 feet was developed to the major easterly fault, where the ore body was faulted south 60 feet. This ore is now being developed east of this fault with a length of 300 feet opened up to date; this ore is well up to the standard grade of the mine.

This same ore body has been intersected on the 500-foot level where a total of 450 feet has already been opened up on two parallel breaks. The present programme of development includes exploring these shoots on the 400-, 800-, and 1,100-foot levels.

The No. 1 shaft was sunk 249 feet, opening up two new levels at 2,125 and 2,250 feet. There appears to be more than one enriched break on these horizons. On the 2,125-foot level there has been developed 600 feet on No. 2,101 vein and 200 feet on No. 2,103 vein.

On the 2,250-foot level, there has been developed 700 feet on the No. 2,201 vein and 80 feet on the No. 2,204 vein. One section of the ore body on the No. 2,201 vein was of as high grade as anything previously developed in the mine.

Two diamond-drill holes have cut the lower extension of this ore zone at the 2,500- and 2,900-foot horizons. The structure and values intersected are excellent.

On the No. 2 or South vein system, there were four major developments in 1929: (1) No. 2,005 ore body east of the shaft on the 2,000-foot level where 500 feet were developed. (2) No. 2,002 ore body west of the shaft on the same level; this was 100 feet long on the sill but lengthened to 125 feet in the stope. (3) and (4) No. 1,775 east and west ore body on the 1,750-foot level east of the shaft and directly above No. 2,005 stope. The area directly above these ore bodies is virgin territory holding out great promise for extensions.

On the 550-foot level an important ore shoot, No. 512, was found 900 feet east of No. 3 shaft, about 150 feet long by about 12 feet wide, lying almost under the old No. 2 shaft. This discovery and the finding of commercial ore on the surface still farther east gives to this area considerable importance.

Lately, what appears to be an important discovery is the No. 502 ore body lying below and a little west of the old No. 404 stope. This development is being rapidly pushed.

The future programme of development has for its objectives the continuation of the opening of No. 1 vein system on the East claim and on the two lower levels (the interference of the Sylvanite corner which occurred on the upper levels of this vein is not expected to take place on the lower levels, inasmuch as the vein is sufficiently far south to miss it); also, the working out of many smaller good prospects in the older workings on both No. 1 and No. 2 veins; then, in the latter part of the year, to start sinking operations with the object of opening up four or five new levels.

The ore reserve situation has been greatly relieved. The present available reserve of broken and unbroken ore is more than 300 per cent. greater than it was at May, 1929. Should developments continue to be as satisfactory as they have been in the past few months, it would not be very long before the mine would be in a position to produce to the capacity of the mill. However, it is considered unwise to hurry this until developments fully warrant it.

The following estimate of ore reserves is given, and in presenting these figures it should be remembered that the Kirkland Lake ores in general, Wright-Hargreaves ores in particular, are extremely erratic in both widths and values, so that great care has to be exercised in any analysis made as a result of the estimate.

However, it has been our endeavour to present conditions as they are, after making such necessary discounts for the high erratics in the sampling, and adjusting the widths to those expected in actual mining operations. After further experience in the mining of these ores, no doubt our methods of computing tonnage and values may be changed to obtain more accurate estimates.

Ore Reserves Estimate, December 31, 1929

Tons	418,877
Grade	$11.30
Value	$4,727,551.53

An intensive study of the metallurgy in connection with the present equipment in the mill indicates that with some minor changes in the flow-sheet and some new equipment, a further economic saving may be made. A more complete report on this subject is expected to be ready in the near future.

GRAPHITE

Black Donald Graphite Company, Limited

Work for the greater part of 1929 was confined to efforts to develop the mine from the new shaft, which has reached a depth of 340 feet. Considerable difficulty was experienced in keeping the shaft pumped out. It was finally dewatered in October and work on it was temporarily suspended. When operations were resumed early in 1930 no further difficulty was met.

During November and December, the McConnell incline was developed for about 75 feet.

The ore procured from this incline, together with ore which had accumulated in the dump, enabled the mill to produce 1,450 tons of finished graphite.

An average of 60 men was employed. R. F. Bunting is manager.

GYPSUM

Canada Gypsum and Alabastine, Limited

The Canada Gypsum and Alabastine, Limited, operated the mines and mills at Caledonia, Seneca township, and Lythmore, Oneida township, Haldimand county, during the entire year. L. V. Robinson is general superintendent.

At Caledonia four 100 h.p. boilers were discarded and a John Inglis 400 h.p. boiler installed, with new boiler-house and coal-handling equipment.

From 95,263 tons of rock mined, the following finished products were obtained: 63,260 tons of plaster, 23,425,000 square feet of Gyproc, and 3,060,000 square feet of gypsum blocks. J. D. Kerr was superintendent, employing an average of 236 men.

At Lythmore an air shaft was sunk and 18,152 tons of rock were mined, from which 15,000 tons of plaster were made. Joseph Mark was superintendent, employing an average of 49 men.

In January, 1930, the company name was changed to Gypsum, Lime and Alabastine, Canada, Limited. The head office of the new company is at Paris, Ont.

In addition to the Caledonia and Lythmore mines, the company operates gypsum plants at Montreal, Winnipeg, Vancouver, and Calgary.

Lime plants are situated at Beachville, Elora, Hespeler, Milton, Limehouse, and Puslinch, Ont., and at St. Mark and Joliette, Que.

Quarries are operated at Mabou, N.S., Gypsumville, Man., and Salmon River, B.C. The alabastine plant is at Paris, Ont.

LEAD

Kingdon Mining, Smelting and Manufacturing Company, Limited

This company operates a producing lead mine, mill, and smelter near Galetta in the township of Fitzroy, Carleton county.

Operations were continuous throughout the year 1929. The main shaft was sunk an additional 122 feet, giving a total depth of 1,448 feet, and a new level was opened up at the 1,400-foot horizon. Development work for the year, other than shaft-sinking, was as follows:—

Level	Station-cutting	Crosscuts	Drifts	
			East	West
	equiv. feet	feet	feet	feet
1,275-foot	....	68	....	1,387
1,400-foot	57	271	88	....

At the smelter the scotch hearth was in continuous operation. The blast furnace was used from June 24 to July 14, 1929, smelting slag from the scotch hearth.

An average of 122 men was employed during 1929, divided as follows: underground, 88; mill, 15; smelter, 14; and surface, 5.

R. R. Rose is mine superintendent, and J. U. MacEwan is smelter superintendent.

LEAD AND ZINC

Lake Geneva Mining Company, Limited

This company has an authorized capitalization of 4,000,000 shares of $1 par value.

The officers are: J. J. McFadden, president; T. W. Lawson, vice-president; W. L. Paterson, secretary-treasurer. The directors are: J. J. McFadden, T. W. Lawson, N. A. Timmins, G. L. Babson, and J. H. Collins. The head office is at 921 New Birks Building, Montreal.

The property held by this company consists of 25 claims in the township of Hess, district of Sudbury, and a road has been built from the head of Lake Geneva to the property, a distance of about three miles.

The Lake Geneva Mining Company, Limited, was formed under the terms of an option obtained by the Towagmac Exploration Company, Limited, from the Collins-Babson interests. This option, in addition, called for 250 feet of shaft-sinking, 600 feet of drifting and crosscutting, 500 feet of raising, and the construction of a 50-ton mill.

Underground work was suspended in the fall of 1929 as the work required underground had been completed. The total underground exploration accomplished was: 250 feet of shaft-sinking, 802 feet of drifting and crosscutting, and 456 feet of raising. The shaft consists of three compartments, and stations were cut at the 160- and 235-foot levels. All lateral work, with the exception of 25 feet, was done on the 235-foot level.

The annual report of the company for 1929 states that the total tonnage of ore blocked out by drifts and raises and indicated by diamond-drilling (previous to 1929) is figured at 73,700 tons, with an average grade estimated at 44 cents gold, 2.33 ounces of silver, 4.24 per cent. lead, and 11.30 per cent. zinc.

During the winter of 1929-30 additional Diesel equipment and a major part of the mill machinery, capable of 100 tons daily, was taken into the property in preparation for fulfilling the final terms of the option.

W. E. Bawden is in charge of operations.

North American Metals Corporation, Limited

The holdings of this company consist of two properties in the township of Dorion, district of Thunder Bay, known as the Dorion and the Ogema mines. Operations were suspended early in 1929.

NICKEL AND COPPER

Falconbridge Nickel Mines, Limited

The officers and directors of this company are: Thayer Lindsley, president; Halstead Lindsley and J. Gordon Hardy, vice-presidents; N. F. Parkinson, secretary-treasurer; W. S. Morlock and J. Gordon Hardy, directors. The head office is at 100 Adelaide Street West, Toronto.

The first annual report of the company covering operations to October 31, 1929, contains the following report of Ernest Craig, mine superintendent:—

Property Features

The company owns a total of 7,960 acres, the main portion of which is composed of one group of claims constituting 7,440 acres and situated in the western part of Falconbridge township, with a small portion in the eastern extremity of Garson township. The norite-sediment contact crosses the property for a total distance of 16,570 feet, the strike of which is approximately east and west. The initial drilling recorded by the Longyear company indicates that the ore zone has a length of at least 10,420 feet, lying along the contact of the norite and sediments.

Work actually commenced on the property on September 7, 1928, and consisted primarily of making the necessary surface preparations, viz., providing suitable housing and transportation facilities preparatory to mine development.

A three-compartment shaft was started September 17 and completed to a depth of 1,033 feet, 60 feet of which was sunk through a sand and gravel overburden prior to encountering bed rock.

While sinking, stations were established at 225, 350, and 1,000 feet from the shaft collar, respectively, and in each case crosscuts were driven north to encounter the ore body.

Intensive development was confined to the 225- and 1,000-foot levels. On the former, drifts were extended east and west following the south contact of the ore body, off which crosscuts were driven north to determine widths and provide stope openings. Raises have also been put up at intervals of 111 feet to provide stope entrances on this horizon.

Development on the 1,000-foot level consists of a drive east and west along the north side of the ore body with short crosscuts at intervals, while an additional crosscut is being driven north to a point 300 feet north of the ore body for the purpose of establishing one of the diamond-drill stations planned for a deep drilling campaign.

In preparation for stoping, box-holing commenced on the 225- and 1,000-foot levels shortly before the close of the current period.

On October 31, 1929, the total mine development footage was distributed as follows:—

	Feet
Shaft	1,033
Drifts and crosscuts	3,056
Raises	268
Total	4,357
Box-holes completed	9

Ore Estimates

On the 225-foot level the ore body has been opened up for a distance of 680 feet with an average width of 55 feet, thereby calling for 3,767 tons per vertical foot of depth. The average grade is 2.97 per cent. nickel, 1.02 per cent. copper, and combined 3.99 per cent., after eliminating 12.8 per cent waste. On the basis of 3,767 tons per vertical foot, and figuring 108 feet above the level to rock surface, a gross tonnage of 406,800 tons is estimated.

The only work accomplished to date on the 350-foot level consists of one crosscut through the ore zone. At this point the ore body proper is narrow, approximating 5 feet of massive sulphides, with an additional 15 feet of disseminated sulphides, showing some high-grade ore along the extreme northerly contact. In estimating the ore width on this level it seems reasonable to consider 15 feet as a fair average, although we have very little data available to confirm this figure. Adopting 15 feet as the average ore width, and taking for length the same as developed on the 225-foot horizon, we estimate 299,200 tons of ore between the 350- and 225-foot levels.

The ore on the 1,000-foot level has been opened up for a distance of 1,060 feet and outlined by crosscuts at irregular intervals. This work has established an average width of 9 feet 6 inches, thus giving 1,014 tons per foot vertical. The average grade is 2.97 per cent. nickel, 0.92 per cent. copper, and 3.8 per cent. combined, after eliminating 9.3 per cent. waste. It is difficult to calculate the tonnage between the 1,000- and 350-foot levels due to the fact that this sector has not been developed, but as the nature of the ore body is very regular, it seems reasonable to estimate 661,000 tons.

The total ore reserves thus indicated within our underground workings amount to 1,367,000 tons, averaging 2.97 per cent. nickel and 0.97 per cent. copper, or 3.94 per cent. combined. The workings are shown on the attached maps.

Diamond-Drilling

During the early part of the period 3,000 feet of drilling was done from surface and at irregular intervals along the ore body. These holes were put down for the express purpose of corroborating the previous Longyear results as to grade, and same were found to check very closely. At the present time we are about to drill to deep levels from the 1,000-foot horizon to investigate the ore occurrences at depth.

Surface Construction

Mine.—This consisted of installing a complete mining plant of ample capacity to take care of the immediate schedules of production, and the erecting and equipping of substantial buildings and attending utilities. Accommodation for 225 men has been provided, exclusive of dwellings referred to in a later paragraph.

Smelter.—The smelter is being erected in accordance with the design of Anton Gronningsater, with J. R. Gill as assistant. Same is located 2,000 feet southeast of the mine shaft and on the northeast shore of Boucher lake.

While the initial capacity of the smelter will be 250 tons per day, most of the equipment is capable of handling double this amount, therefore an increase to 500 tons per day can be attained with very few additions. At the time of this report the main smelter tructure and subsidiary buildings have been completed and practically all heavy machinery installed, hence it is reasonable to assume that we will be ready to go into production some time in the month of January, providing no unforeseen contingencies develop in the meantime.

The flow-sheet of this reduction works is simple. Following crushing and waste-picking on belts at the shaft, the sorted ore will be transported by aerial tram to the smelter bins. Charge cars will take it to the blast-furnace, the matter from which will be blown in basic-lined converters to an 80 per cent. metallic product. This will be barrelled and shipped to the company's electrolytic refinery in Norway, and the refined metals sold on the European market.

Power

Electric energy is being secured from the Wahnapitae Power Company's No. 3 plant and is transmitted a distance of 6½ miles over our privately owned line to the property.

Transportation

During the period, approximately 11,500 tons of freight were transported by truck to the property. All car-load shipments were unloaded at Garson, a distance of 31½ miles from the property, but smaller consignments were transported from Sudbury, a distance of 14 miles.

On October 17, a spur of the Canadian National Railways was completed from Garson to the smelter site, thus solving the transportation problem in a very satisfactory manner.

Dwellings

Twenty-five substantial five-room cottages have been erected for the purposes of housing permanent employees. Same are equipped with all modern conveniences. Educational and medical facilities have been satisfactorily taken care of through the erection of a suitable school and first-aid hospital.

The report of J. Gordon Hardy, consulting engineer and vice-president, is, in part, as follows:—

Ore Reserves

We are now able to indicate ore reserves within the area bounded by our underground workings . . . . The figure of 1,367,000 tons sorted ore has been calculated as probable, and there is not much chance of this being an overstatement.

Hitherto the Longyear estimate, based on their drilling results, has had to stand. There was no check on their figures until we had carried out our underground development work. This work now shows their assumption that the ore area shown by their drilling down to 250 feet would continue of equal size to 500 feet to be unjustified. It is true that in our workings we have only touched the ore body at one point between the 250- and 500-foot horizons, in our crosscut from the shaft at 350 feet, but the evidence there presented, coupled with that given by our 1,000-foot level, makes us believe that there exists a definite pinching in the ore body before the 350-foot level is reached. This condition is by no means unusual in the nickel range and can just as readily be compensated by our encountering elsewhere a swell that we had not counted on.

The comparison above made is with the Longyear estimate of 1,600,000 tons to 500 feet depth and within the "swell" of 600 feet in length. Our results show somewhat less tonnage than this, even when we extend the area down to 1,000 feet instead of their 500 feet depth.

Ore Reserves

What comparison we may ultimately make with the larger Longyear estimate of 5,700,000 tons over a length of 7,500 feet and to a depth of 500 feet we have yet no means of checking. Our work has not gone far enough to permit the expression of an opinion, but we do know that the ore-bearing contact in our ground is much longer than the 7,500 feet quoted.

As a matter of fact, however, the question of available tonnage is not one that gives us concern. In less than a year we have developed underground enough ore to keep our smelter running at double its present capacity for at least seven years, and we have such evidence of continuous and lengthy mineralization within our property that we are satisfied all tonnage demands will be met as they develop.

Much more important is the question of the metal content of our tonnage, and here we have been fortunate enough to find underground a somewhat better grade than that indicated by the Longyear drilling. The latter showed an average of 2.32 per cent. nickel and 1.19 per cent. copper for the tonnage now covered by our underground workings. Our much more complete investigation and sampling underground yields an average of 2.97 per cent. nickel and 0.97 per cent. copper. The gross value recoverable from this grade of ore . . . is estimated at $21.90 per ton.

The deep-drilling campaign now inaugurated is planned to give us intersections from the 1,000-foot level down to the 3,000-foot. So far there has been no difference in the ratio between nickel and copper in the ore found on the 225-foot or 1,000-foot levels, and the average grade of ore on these two levels is about the same.

Lateral development is being pushed on both the 225- and 1,000-foot levels, particularly to the west. The last westerly exposure on the upper level measured 50 feet in thickness and is still going strong. The western face of the 1,000-foot also shows strongly and with increasing width. Drill records show good intersections for 800 feet farther west, and there is just a suggestion that the ore rakes in that direction. The eastern faces are not so good and our drilling records show that we have to go some 400 feet farther east to where we can expect betterment.

Estimated Costs

Figuring on a recovery per ton of sorted ore of 50 pounds nickel and 15 pounds copper plus 4 cents in precious metals per pound of nickel, the cost of producing nickel is estimated at 20 cents per pound. This after crediting copper and precious metals to the nickel and on the initial tonnage basis of around 250 tons of ore treated per day.

When marketing conditions permit us to double this output, the cost of nickel, with like credits should fall to 18 cents per pound.

Estimated Earnings

On the initial tonnage basis and production of somewhat over 2,000 tons of nickel annually, the above cost should yield earnings of $656,000 yearly, or 20 cents per share at present outstanding.

Without further financing, this scale of operations can be doubled as soon as we have established a market for our products, and then the annual earnings should mount to $1,487,000, or 46 cents per share. These estimates are based on a selling price for nickel in Europe of £165 per long ton and £75 for cathode copper. It is obvious that earnings will at first go into this expansion and into establishing reserves.

Beyond this point of production further financing would be required. Smelting equipment would have to be rearranged and increased. The Norway refinery would be up to its limits and additional refining capacity should then be installed in Canada. I would repeat that there is every reason to believe that the mine can continue to develop any tonnage supply that such probable additional capacity would demand.

Smelter

Construction of this installation has progressed satisfactorily, and would have been even more rapid had equipment manufacturers lived up to their delivery promises. Even yet some deliveries are hanging fire and may delay the expected January commencement of operations.

Refinery

The Kristiansand (Norway) nickel refinery purchased by Falconbridge, and held by a Norwegian subsidiary named Falconbridge Nikkelverk, has been overhauled and is in process of doubling its capacity to that of 2,500 tons of refined nickel yearly. Much of this added equipment will permit of an ultimate output of around 4,000 tons of refined nickel yearly, so that increase to this latter figure will not entail any great extra expenditure of time or money. This development is under the personal supervision of our consulting metallurgist, Anton Gronningsater, of long experience in nickel.

In addition to handling our own Falconbridge output, this refinery will treat on a toll basis certain Norwegian production, which should add to Falconbridge earnings. Mr. Gronningsater reports that actual operation of this Norwegian production commenced at the end of October.

Our own matte should begin to arrive at the refinery by the end of February, and will then commence to fill up the system of the increased installation. It is not expected that refined nickel from our own production will reach the market before July, 1930.

Marketing

A sales contract has been entered into with the well-known metal firm of Brandeis, Goldschmidt and Company, of London, for the marketing of our Kristiansand output. Their wide connections and experience in European metal selling should be of material assistance to us in this important department of our venture.

BALANCE SHEET, OCTOBER 31, 1929

Assets

Cash on hand and in banks	$1,124,629.99	
Amounts receivable on investments sold	552,500.00	
Other accounts receivable	1,890.15	
Mining supplies	28,479.81	
		$1,707,499.95
Receivable on capital stock subscriptions in monthly instalments to March 2, 1930		675,000.00
Ventures Limited		4,046.05
Mining properties and claims	$2,551,299.03	
Mine and smelter buildings, machinery, and equipment	731,487.83	
		$3,282,786.86
Incorporation expenses	$1,385.00	
Development and administrative expenses deferred	252,968.45	
Prepaid insurance	3,529.02	
Commission on shares sold	250,000.00	
		$507,882.47
Falcon ridge Nikkelverk A/S, investments in and advances to	$643,666.16	
Special advance recoverable as a tonnage charge on custom metal as and when refined	219,000.00	
		$862,666.16
		$7,039,881.49

Liabilities

Capital, authorized 5,000,000 shares no par value, issued and to be issued 3,213,305 shares (options outstanding, 550,000 shares)	$6,909,581.64
Accounts and wages payable	130,299.85
Contingent liability, for completion of capital expenditure on mine and smelter and Nikkelverk refinery.	
	$7,039,881.49

CONSOLIDATED BALANCE SHEET, OCTOBER 31, 1929

Assets

Cash on hand and in banks	$1,130,745.99	
Amounts receivable on investments sold	552,500.00	
Other accounts receivable	1,890.15	
Mining stores	46,461.44	
		$1,731,597.58
Receivable on capital stock subscriptions		675,000.00
Ventures Limited		4,046.05
Mining properties and claims	$2,551,299.03	
Purchase price of Norway refinery ($389,333.33), less sale of old material	379,713.00	
Mine and smelter buildings, machinery and equipment, and new equipment and construction at refinery (Norway)	917,418.37	
		$3,848,430.40
Incorporation expenses	$1,385.00	
Preliminary organization, development and administrative expenses deferred	320,682.13	
Prepaid insurance	3,529.02	
Commission on shares sold	250,000.00	
		$575,596.15
Special advance recoverable as a tonnage charge on certain custom metal as and when refined		219,000.00
		$7,053,670.18

LIABILITIES

Capital, authorized 5,000,000 shares no par value, issued and to be issued 3,213,305 shares (options outstanding, 550,000 shares)	$6,909,581.64
Accounts and wages payable	144,088.54
Contingent liability, for completion of capital expenditures at mine and smelter and Nikkelverk refinery.	
	$7,053,670.18

From October 31, 1929, to December 31, 1929, mine development footage was distributed as follows:—

	Feet
Drifts and crosscuts	1,222
Raises	69
Total	1,291
Box-holes completed	29

This brings the total mine development footage as at December 31, 1929, to the following:—

	Feet
Shaft	1,033
Drifts and crosscuts	4,278
Raises	337
Total	5,648
Box-holes completed	38

An average of 131 men was employed during 1929, of whom 40 were employed underground.

Ernest Craig is superintendent; J. R. Gill, smelter superintendent; and W. Samuel, mine engineer.

International Nickel Company of Canada, Limited

The officers of this company are: Charles Hayden, chairman of the board; Robert C. Stanley, president; John L. Agnew, vice-president; John F. Thompson, assistant to the president; James L. Ashley, secretary and treasurer.

The directors whose term expires in 1930 are: John P. Bickell, Toronto; D. Owen Evans, Sir Harry McGowan, Rt. Hon. Lord Melchett, Hon. Henry Mond, Robert L. Mond, London, England; William E. Corey and Wm. N. Cromwell, New York; Wm. W. Mein, San Francisco, Cal.; Thomas Morrison and Grant B. Shipley, Pittsburgh, Pa.; Wm. J. Hutchinson and Seward Prosser, Englewood, N.J.

The directors whose term expires in 1931 are: John L. Agnew, Copper Cliff; J. W. McConnell, Montreal, Que.; Britton Osler, Toronto; J. A. Richardson, Winnipeg, Man.; Rt. Hon. Lord Weir, Glasgow, Scotland; James L. Ashley, John F. Dulles, Charles Hayden, Robert C. Stanley, Andrew V. Stout, New York; Wm. T. Graham, Greenwich, Conn.; Reg. Halladay, Cresskill, N.J.

The International Nickel Company of Canada, Limited, operates mines in the Sudbury district; smelters at Copper Cliff and Coniston; hydro-electric plants at Turbine, Wabageshik, and Nairn Falls; refineries at Port Colborne, Ont., Acton, London, England, and Clydach, Wales; rolling mills at Birmingham, England, and Huntingdon, W. Va., U.S.A.; a colliery at Pontardawe, Wales; and a foundry at Bayonne, N.J., U.S.A. The general offices are at Copper Cliff, Ont.

The following information is extracted from the annual report of the company covering the calendar and fiscal year ending December 31, 1929:—

This report deals jointly with the affairs of the International Nickel Company of Canada, Limited, and all of its subsidiaries, which now include the Mond Nickel Company, Limited. The financial statements submitted herewith reflect the various changes in capital structure incident to the inclusion of the Mond properties and other assets, and accordingly are not strictly comparable with those of last year.

Net earnings for the calendar year ended December 31, 1929, were $22,235,996.87 as compared with $12,399,317.42 for the previous year. This increase in net earnings is attributable not only to the inclusion of Mond's earnings but also to a substantial growth in the consumption of your company's products.

As a result of the plans of exchange of stock of your company for stock of the former International Nickel Company (New Jersey) and stock of the Mond Nickel Company, Limited, $27,627,825.00 of 7 per cent. cumulative preferred stock and 13,758,208 shares of common stock without par value are issued or are to be issuable upon completion of the exchanges.

CONSOLIDATED GENERAL BALANCE SHEET, DECEMBER 31, 1929

ASSETS

	Dec. 31, 1929	Dec. 31, 1928
PROPERTY ACCOUNT:		
Property owned and operated as at December 31, 1928, together with properties acquired with the Mond Nickel Company, Limited	$134,988,485.38	$68,456,428.31
Addition during year 1929	21,175,351.76	7,816,102.10
	$156,163,837.14	$76,272,530.41
DEDUCT RESERVES:		
Depreciation of plants	$14,492,003.23	$11,852,063.46
Depletion	5,373,476.31	4,560,025.19
	$19,865,479.54	$16,412,088.65
	$136,298,357.60	$59,860,441.76
SUNDRY INVESTMENTS	2,910,339.13	2,058,896.67
	$139,208,696.73	$61,919,338.43
CURRENT ASSETS:		
Inventories of metals and supplies at cost or market, whichever is lower	$17,109,312.18	$7,278,429.46
Accounts and bills receivable	8,487,682.26	4,622,873.89
Government securities	745,675.00	2,730,100.00
Call and time loans	13,962,900.00	17,600,000.00
Cash	2,432,433.32	1,848,666.69
	$42,738,002.76	$34,080,070.04
	$181,946,699.49	$95,999,408.47

LIABILITIES

	Dec. 31, 1929	Dec. 31, 1928
CAPITAL STOCK:		
7 per cent. cumulative preferred	$27,627,825.00	$8,912,500.00
Common stock, no par value, 13,758,208 shares	57,360,541.67	46,909,200.00
	$84,988,366.67	$55,821,700.00
DEBENTURE STOCK OF BRITISH SUBSIDIARIES:		
5 per cent. first mortgage debenture stock	$1,822,500.00	
5½ per cent. mortgage debenture stock	4,938,119.64	
6¼ per cent. mortgage debentures	866,052.00	
	$7,626,671.64	
Ten-year serial 5 per cent. purchase money notes	$1,500,000.00	$1,800,000.00
CURRENT LIABILITIES:		
Accounts payable and pay rolls	$6,101,324.77	$2,245,733.59
Taxes accrued	3,921,366.03	1,214,893.45
Reserved for preferred dividend payable February 1, 1930	483,472.94	155,968.75
	$10,506,163.74	$3,616,595.79

LIABILITIES—*Continued*

Funds and Reserves:		
Insurance and contingent	$2,837,763.96	$1,245,603.55
Retirement system	1,100,032.81	345,689.20
	$3,937,796.77	$1,591,292.75
Surplus:		
Capital surplus represented by surpluses of subsidiaries at acquisition	$48,428,730.57	$16,030,641.57
Earned surplus	24,958,970.10	17,139,178.36
	$73,387,700.67	$33,169,819.93
	$181,946,699.49	$95,999,408.47

CONSOLIDATED GENERAL PROFIT AND LOSS STATEMENT

(For twelve months ended December 31, 1929)

	Dec. 31, 1929 (12 months)	Dec. 31, 1928 (12 months)
Earnings of All Properties after deducting manufacturing, selling expense, ordinary repairs and maintenance	$29,353,072.97	$16,076,595.52
Other Income	1,800,587.48	629,999.05
Total Income	$31,153,660.45	$16,706,594.57
Deduct:		
General office expense	$1,846,316.18	$967,478.56
Reserved for income and franchise taxes (estimated provision)	2,682,394.99	1,188,678.59
	$4,528,711.17	$2,156,157.15
Net Operating Income	$26,624,949.28	$14,550,437.42
Deduct:		
Interest paid and accrued	$448,066.48	....
Provision for retirement system	886,051.07	$556,765.02
Provision for depreciation and depletion	3,054,834.86	1,594,354.98
	$4,388,952.41	$2,151,120.00
Net Profit for the Year	$22,235,996.87	$12,399,317.42
Dividends:		
Preferred	2,040,501.23	557,034.25
Common	12,375,703.90	4,331,095.25
Balance to Surplus	$7,819,791.74	$7,511,187.92

QUARTERLY CONSOLIDATED GENERAL PROFIT AND LOSS STATEMENT

(For twelve months ended December 31, 1929)

	1st quarter Mar. 31, 1929	2nd quarter June 30, 1929	3rd quarter Sept. 30, 1929	4th quarter Dec. 31, 1929
Earnings of all Properties after deducting manufacturing, selling expense, ordinary repairs and maintenance	$7,391,660.85	$7,291,861.49	$7,446,226.11	$7,223,324.52
Other Income	469,047.98	536,207.25	537,465.54	257,866.71
Total Income	$7,860,708.83	$7,828,068.74	$7,983,691.65	$7,481,191.23
Deduct:				
General office expense	$527,728.79	$474,197.01	$376,720.12	$467,670.26
Reserved for income and franchise taxes (estimated provision)	748,698.05	678,229.70	821,765.22	433,702.02
Net Operating Income	$6,584,281.99	$6,675,642.03	$6,785,206.31	$6,579,818.95

CONSOLIDATED GENERAL PROFIT AND LOSS STATEMENT—*Continued*

DEDUCT:				
Interest paid and accrued....	$104,251.56	$103,454.08	$130,930.30	$109,430.54
Provision for retirement system....................	151,190.66	191,507.09	260,524.27	282,829.05
Depreciation and depletion...	738,648.47	732,696.09	766,174.16	817,316.14
NET PROFIT.................	$5,590,191.30	$5,647,984.77	$5,627,577.58	$5,370,243.22
DIVIDENDS:				
Preferred...................	589,876.11	484,064.00	484,069.75	482,491.37
Common...................	2,749,146.80	2,750,116.40	3,438,069.10	3,438,371.60
BALANCE TO SURPLUS.........	$2,251,168.39	$2,413,804.37	$1,705,438.73	$1,449,380.25

Canadian Properties

The properties of the Mond Nickel Company, Limited, in Canada were acquired by your company directly and are as follows: Garson, Levack, and Frood Extension mines, together with lands and mineral claims in the Sudbury area, a smelter at Coniston, and hydro-electric plants at Wabageshik and Nairn Falls.

During the year 1,991,910 short tons of ore were mined, of which 1,177,323 tons were mined at Creighton. 368,686 tons at Levack, 246,049 tons at Garson, and 199,852 tons at Frood.

The smelters at Copper Cliff and Coniston ran at capacity throughout 1929 and produced 132,030 short tons of bessemer matte. Of this total the Copper Cliff plant furnished 91,613 tons and the Coniston plant 40,417 tons.

At the Port Colborne refinery, production of refined nickel was kept in close balance with consumption. Three additional electrolytic units were installed during 1929, and this refinery now has an annual capacity of 86,400,000 pounds of electrolytic nickel, 36,000,000 pounds of nickel in oxide, and 120,000,000 pounds of blister copper.

At the Coniston works a new sintering plant has been erected and placed in operation. This sintering plant, together with the installation of fast cranes and improved matte handling facilities in the smelter, will materially increase matte production.

A fire of unknown origin destroyed the headframe and rock-house at the Levack mine in December, 1929. This surface plant, formerly of timber, will be replaced by steel, and the mine will resume production by July, 1930. No shortage of nickel will result as your other mines can readily supply smelter requirements.

"Nitre cake," an essential flux used in the separation of copper and nickel, is an acid sodium sulphate heretofore available in quantity as a by-product from the manufacture of nitric acid. Manufacturers of nitric acid are adopting the atmospheric nitrogen fixation process with the result that the production of nitre cake is diminishing and its price rising. In order to insure a permanent supply of this material at a reasonable cost your company has acquired by lease a large deposit of sodium sulphate located in Saskatchewan and has contracted with the Horseshoe Lake Mining Company, Limited, to develop this property. The sodium sulphate will be delivered to a sulphuric acid plant now being constructed at Copper Cliff by Canadian Industries, Limited. Your company has entered into a long-term contract with Canadian Industries, Limited, under which sulphur gases from the new smelter will be sold to that company for the manufacture of sulphuric acid primarily for the conversion of Horseshoe Lake sodium sulphate into nitre cake in quantities sufficient to meet refinery requirements.

As announced during the past year your company, jointly with the American Metal Company of Canada, Limited, and Consolidated Mining and Smelting Company of Canada, Limited, is erecting an electrolytic copper refinery at Copper Cliff, Ont. The initial capacity of this works, which will be the largest of its kind in the British Empire, will be 120,000 short tons per annum and the capital expenditure involves approximately eight million dollars. Your company has acquired a 40 per cent. interest in this undertaking. Rapid progress has been made, and this plant should be refining copper from the Frood mine by the autumn of 1930. The company organized to carry on this business is known as Ontario Refining Company, Limited.

Since the last report was issued, the Frood surface plant has been completed and put into successful operation. There are now 2,000 men employed at this mine, and underground development is progressing rapidly. During the year ended December 31, 1929, 48,877 lineal feet of drifts, crosscuts, raises, winzes, and box-holes were completed and a ventilating shaft raised 1,583 feet. This vast amount of work, aggregating nearly ten miles, brings the total underground development, since work was started in September, 1926, to a total of 64,291 lineal feet, or over twelve miles. Communications have been established between the Frood mine and the Frood Extension mine (the ore body being continuous) on the 2,000-, 2,400-, and 2,800-foot levels, and connections will soon be completed on the 2,200- and 2,600-foot levels.

The proven ore in this deposit now amounts to 134,673,000 tons, of which 43,562,000 tons is high-grade ore below the 1,400-foot level. Extension sampling shows that the ore body thus far developed grows progressively richer in copper as depth is attained. This was indicated by assays on ore taken from crosscuts, results of which were submitted in the report of December 31. 1928. The average grade of proven ore below the 1,400-foot level runs: nickel, 2.39 per cent.; copper, 3.62 per cent.; a total of 6.01 per cent. It is of interest to note that over

10,000,000 tons of high-grade ore were added to the Frood reserves as a result of development work in the lower levels completed during the year 1929.

Recent work on the 2,800-foot level is showing much greater widths and evidence of extensions along the strike both to the north and to the south and promises further substantial additions to the Frood high-grade reserves. No special effort is being made to block out more ore, as this situation will unfold as mining operations proceed.

Monthly output reached 37,600 tons in December, 1929, about two-thirds of which came from development work, and will increase month by month during 1930 as new stopes are brought to the producing stage. It is your management's objective to prepare this mine to furnish at least 4,500 tons daily by midsummer of 1930 and to bring up the output to 6,000 tons daily by January 1, 1931.

Progress on the new smelter and concentrator, plans for which were mentioned in the last report, has been rapid. All of the reverberatory smelting-plant steel was erected and the plant closed in during 1929. Foundations are completed and steel is being erected on the concentrator plant, which will have a capacity of 8,000 tons per day. There will be 35,700 tons of structural steel in these two structures and their auxiliary buildings. The ore bins, having a capacity of 10,000 tons, have been completed, as has also the screening and crushing plant, having a daily capacity of 8,000 tons.

The smelter stack, 510 feet high, inside diameter 45 feet, is finished and a coal grinding plant, having a daily capacity of 700 tons of ground coal, is 80 per cent. completed.

Smelter equipment, consisting of five 1,000-ton reverberatory furnaces, thirty 10-hearth Herreshoff roasters, and eight 13- by 35-foot matte converters, is being installed and, barring unexpected interruptions, this plant will be blown in during the summer of 1930. When completed this smelter will have a daily capacity for 5,000 tons of concentrates from the new concentrator or a like tonnage of direct smelting ore and should, from the standpoint of flexibility and cost of production, compare favourably with any similar plant now in operation.

Ore Reserves

Your company now has proven ore reserves of 202,620,000 short tons. This tonnage includes Frood mine low-grade, 91,111,000 tons; Frood high-grade, 43,562,000 tons; Creighton mine, 5,503,000 tons; Levack mine, 19,062,000 tons; Garson mine, 3,193,000 tons; Murray mine, 22,490,000 tons; Stobie mine, 13,712,000 tons; Crean Hill mine, 3,028,000 tons; other mines, 959,000 tons.

Without taking into consideration the possibility of lateral extensions and probable ore below 3,000 feet, the Frood high-grade ore, together with the reserves in the other mines now being worked (Creighton, Levack, and Garson), indicates a life at the present annual rate of nickel consumption of twenty-five years. Beyond this period the vast reserves in other mines and in the upper levels of the Frood, with future inevitable improvements in mining methods and metallurgical processes, guarantee low-cost nickel production over a long period of time and fully justify a continuation of your company's aggressive sales development policy.

It was stated in the last annual report to stockholders that precious metal values in Frood ore would be determined by smelting average samples of ore obtained from development work and analysing the resultant bessemer matte, this method being more accurate than the usual method of analysing ore samples. Results obtained in this way indicate that bessemer matte made from Frood ore mined below the 1,600-foot level will net a return in precious metal values of approximately $50 per ton.

Obviously the amount of income from this source will depend upon the marketability of the platinum metals, for which the demand is at present limited. Your management has had its research and development departments actively engaged for some time past with a view to extending the uses for platinum metals and thus avoiding surplus production otherwise probable when the prospective output of the Frood mine is considered.

Outlook

During 1929 your company procured the greatest volume of business in its history, notwithstanding that sale of nickel for the manufacture of ordnance and armour plate were negligible.

The world's consumption of primary nickel in all forms reached a total of 136,000,000 pounds, exceeding the corresponding figure for 1928 by 16 per cent. and the peak of the work period by 29 per cent.

With the inclusion of the Mond Nickel Company, Limited, the scope of your company's activities has been materially expanded. Research and sales staffs have been reorganized, and your company's proved sales policy now inaugurated by Mond in Great Britain and Continental Europe is already showing appreciable results.

Plant betterments and the installation of additional mining and smelting facilities in Canada, Great Britain, and the United States are progressing satisfactorily. The major projects in this programme, entailing a further expenditure of approximately $12,000,000, are scheduled for completion during the ensuing year and will make provision for a total annual output of 180,000,000 pounds of nickel. In pursuance of your company's policy of providing for an adequate supply of metal to meet rapidly increasing demand, expenditures of this character aggregating $37,500,000 have been made since 1924.

The increased output of copper in 1929 compared with 1928 was largely due to Frood ore extracted as stopes were opened in this mine. Copper production will show a further large increase as the Frood mine comes into operation this year coincident with the completion of the electrolytic refinery of the Ontario Refinery Company, Limited, at Copper Cliff, Ont.

Each of the principal uses of nickel gained ground during 1929, and it is most gratifying that sales of no important type of nickel steel or nickel alloy are lagging.

In the automotive industry large quantities of nickel were consumed and high percentage nickel steels are now standard materials used in the manufacture of tractors, trucks, and busses. Similar steels are also specified for at least 90 per cent. of modern aeroplane engines.

The use of nickel steel is rapidly progressing in locomotive construction. Many railroads are using or are now experimenting with nickel steel and nickel cast-iron for such purposes as boiler shells, tubes, forgings, stay-bolts, frames, cylinders, and other castings. This field is a most promising outlet for a large tonnage of nickel.

Stainless steels and irons containing 8 to 12 per cent. of nickel are rapidly coming into prominence. Although a recent development, your company's sales of nickel for this requirement have increased over 400 per cent. during the past year. There is every reason to believe that the manufacture of stainless steel is in its initial stage and will ultimately become one of the principal outlets for nickel. Large quantities of this alloy will be used for automobile radiators, lamps, and trim in 1930. Some fifteen steel companies in America and Europe are now making and selling this product.

The use of nickel in cast iron and in cast steel has expanded satisfactorily. Several of the high nickel content irons, such as corrosion- and growth-resisting iron, high strength iron and hard chilled iron, are being vigorously developed for a great variety of applications. Sales of nickel to foundries increased 50 per cent. in 1929, and continued progress may be expected.

Magnetic nickel iron alloys, used principally in radio transformers and telephone coils, are being considered for power distribution transformers, a much wider field of application. The consumption of these alloys increased 100 per cent. in 1929, and there is every prospect for another large advance in 1930.

The demand continues to expand for nickel-chromium and nickel-chromium-iron heat-resisting alloys for equipment and structures operated at high temperatures, such as electrical heaters and stoves, metallurgical furnaces, chemical retorts, and heat regenerators. Some twenty manufacturers are now engaged in the production, development, and sale of these materials.

Consumption of nickel for electro-plating has materially increased, due not only to the expansion of the use of nickel plating, particularly in the automotive industry, but also to the gradual adoption of heavier nickel deposits. While many articles are now finished with chromium plate, this finish is usually applied on a foundation of heavy nickel-plate, as in the case of automobile trim.

Sales of mill products from the Huntingdon and Birmingham plants were well in excess of last year, and there is a growing demand for rolled nickel alloys such as copper-nickel, German silver, chromium-nickel, and iron-nickel. Sales of pure rolled nickel have rapidly expanded, and increased consumption is indicated for such diversified purposes as radio tubes, caustic evaporators, oil-well strainers, dairy apparatus, and plating anodes.

Monel metal sales have continued to expand for both new and established uses. Modern design has facilitated its adoption for architectural decoration in buildings such as banks, offices, and hotels. A comprehensive campaign has been undertaken to popularize Monel metal for domestic appliances, such as kitchen and pantry sinks, table tops, and washing machines. Through wide publicity the merits of this alloy are now generally recognized in many countries where distributors have been selected by your company. A survey is at present under way with a view to stimulating the consumption of Monel metal in China and Japan.

The business your company will secure during 1930 depends largely on activity prevailing in other lines of industry. Your company has an advantage in having a world market for a diversity of products which makes for continuity of operations and stability of earnings. Nickel is now essential to industry, and applications of a permanent character will continue to multiply. Copper and precious metals, heretofore valuable by-products, will shortly become more important sources of revenue to your company. All factors considered, your management believes that the outlook is promising for sustained progress during 1930.

The International Nickel Company of Canada, Limited, employed an average force of 4,586 men in the Sudbury district during 1929, divided as follows:—

Creighton	864
Frood	1,324
Garson	342
Levack	382
Copper Cliff	1,040
Coniston	634
Total	4,586

During 1929 the following superintendents were in charge of the various mines of the company: superintendent of mines, Oliver Hall; Creighton mine, R. D. Parker; Frood mine, G. L. Helmrich, succeeded J. P. Hussey and A. D. Carmichael, with F. J. Eager as assistant; Garson mine, W. J. Mumford, succeeded A. L. Sharp; Levack mine, A. L. Sharp, succeeded F. J. Eager.

McVittie-Graham Mines, Limited

In the spring of 1929 control of this company passed to interests comprised of the British Metals Corporation, N. A. Timmins interests, and F. M. Connell.

The officers and directors of the company are: F. M. Connell, president; R. E. Stavert, vice-president; Geo. E. Leighton, J. I. Rankin, and Roy D. Hearn, directors.

The executive offices are at 132 St. James Street West, Montreal. W. E. Segsworth is general manager.

The following is from the report of the general manager for the year ending December 31, 1929:—

Moose Lake.—The shaft was completed to 265 feet, a station cut at 250 feet, and crosscuts run 58 feet west and 59 feet east. From the west crosscut a drift was run 237 feet north, and from the east crosscut a drift was run 229 feet south.

From these drifts, which were parallel to the ore zone, twelve horizontal diamond-drill holes were run across the formation through the contact. The total number of feet drilled was 1,593.

In addition to this underground work, the surface outcrops were trenched and sampled and a magnetic survey made along the norite-granite contact. The result of this work was the disclosure of four lenses of ore. These lenses were spread over a distance of 1,800 feet, and the magnetic survey did not show any connecting bodies intervening.

Work was discontinued on the Moose Lake property at the end of July. Deep diamond-drilling was commenced again in December, and by the end of the year the first hole had reached a depth of 264 feet and had not reached its objective.

Totten-Howland Option.—The geological mapping of this property was carefully gone over and the drill cores relogged. As a result of this work, diamond-drill hole No. 6 was deepened from 1,467 feet to 1,902 feet, with no result.

On the other properties under option, the most important of which were the Ella Lake and the Clear Lake properties, magnetic surveys and surface trenches were run, but this work did not disclose any showing large enough to continue work under the option terms.

Examination of Holdings.—All the properties owned by the company were carefully examined, especially along the norite contact; and where conditions appeared favourable, magnetic or electric surveys were run. None of the properties yielded any discovery worthy of active development at this time. Detailed maps and reports on each of these properties are on file.

Examination of Properties Submitted.—Twenty-two outside properties were examined with a view to taking up options. Of these, two were considered worthy of further attention, and negotiations are still in progress on the most promising.

Prospecting.—In July, eleven claims were staked in Maclennan township on the east rim of the Sudbury basin. An endeavour was made to locate ore on these claims, both by magnetometer and by electrical survey, but as nothing was found the claims were abandoned.

Sudbury Offsets, Limited

This company is capitalized at 5,000,000 shares of $1 par value. The officers and directors are: C. T. Young, president; D. W. Lang, vice-president; S. J. Defoe, secretary-treasurer; Frank Dennie, G. H. Sedgewick, and Geo. Glendinning, directors. The head office is at 1004 Bank of Hamilton Building, Toronto.

Sudbury Offsets, Limited, own and have been developing 46 claims in Foy township, district of Sudbury, on the north rim of the basin. The company reports a total of 8,610 feet of diamond-drilling done during 1929, together with trenching, stripping, and the establishment of roads.

SILVER

Agaunico Cobalt Mines, Limited

The Agaunico Cobalt Mines, Limited, operated the property in Bucke township, district of Timiskaming, throughout the year.

The officers of the company are as follows: D. L. Jemmett, president; H. Jemmett, secretary. The directors are: D. L. Jemmett, Jas. L. Ross, Jas. L. Ross, Jr., and E. M. Carruthers.

During the year the following underground work was done:—

	Feet
Exploration	97
Developing	88
Raising	23

Shipments of cobalt ore, having a value of $43,609.11, were made to the Deloro smelter and to Germany.

J. M. C. Dunlop was resident manager, employing an average of 29 men.

Blair Gowganda Silver Mines, Limited

The Blair Gowganda Silver Mines, Limited, has a capitalization of $1,000,000, divided into 500,000 shares of common stock of $1 par value and 5,000 shares of preferred stock, par value $100. The officers of the company are: W. J. Blair, president; T. H. Plunkett, vice-president; Miss J. Dodd, secretary. The directors are: W. J. Blair, Geo. H. Sedgewick, E. L. Thompson, W. W. Hall, C. B. Ulrich, and F. A. Turnquist.

The following work was done from June 6 to November 20, 1929: sinking, 49 feet; drifting, 250 feet; and crosscutting, 110 feet. An average force of 12 men was employed. M. D. Kennedy was manager. The mine is in Nicol township, district of Timiskaming. The head office is at Barrie, Ont.

Arthur Brocklebank

Arthur Brocklebank operated the Kerr Lake mine in Coleman township, district of Timiskaming, under lease, during 1929.

Shipments of ore to the smelter at Deloro totalled 65.38 tons, having a value of $57,269 in silver and $1,993 in cobalt. Bullion valued at $5,029 was shipped.

Ten men were employed.

C. E. Cain and Associates

In 1929, C. E. Cain, Wesley Preston, and W. D. Taylor bought the Beaver mine in Coleman township, district of Timiskaming, from the Northern Canada Mining Corporation.

All work on the property was done by the owners. Shipments of ore having a value of $1,810 were made.

Castle-Trethewey Mines, Limited

Castle-Trethewey Mines, Limited, has a capital of $2,000,000 in shares of $1 par value. The board of directors comprises: J. P. Bickell, president; J. B. Tudhope, vice-president; Balmer Neilly, secretary-treasurer; W. J. Sheppard, S. R. Wickett, and D. H. McDougall, directors. The executive offices are in the Standard Bank Building, Toronto.

Angus D. Campbell is mine manager, and 120 men are employed at the property, which is in Haultain township, district of Timiskaming.

The following is taken from the manager's report for the fiscal year ending March 31, 1930:—

PRODUCTION

Concentrates shipped, or ready for shipment, dry tons	301.04
Ounces, per ton	2,761.45
Total fine ounces silver recovered	831,307.00
Total pounds cobalt recovered	37,834

REVENUE

Total ounces paid for	768,094.24	
Average price obtained per ounce	$0.4966	
Revenue from sale of silver		$381,440.12
Total pounds cobalt sold	32,656	
Revenue from sale of cobalt		5,033.23
Total revenue		$386,473.35

PRODUCTION SINCE COMMENCEMENT OF OPERATIONS

Period	Months	Tons milled	Ounces per ton recovered	Gross production, ounces	Gross value, silver and cobalt
Feb. 1, '22, to June 30, '22	5	Sorting	....	40,000	$28,000.00
July 1, '22, to June 30, '23	12	Sorting	....	62,811	41,146.80
July 1, '23, to June 30, '24	12	7,607	46.03	350,147	229,656.95
July 1, '24, to June 30, '25	12	30,273	30.62	927,088	637,712.10
July 1, '25, to June 30, '26	12	34,425	29.03	999,234	683,601.48
July 1, '26, to Mar. 31, '27	9	29,136	26.18	762,861	426,928.53
Apr. 1, '27, to Mar. 31, '28	12	40,250	21.32	858,044	486,186.47
Apr. 1, '28, to Mar. 31, '29	12	43,186	22.04	951,718	546,937.28
Apr. 1, '29, to Mar. 31, '30	12	45,302	18.35	831,307	383,766.97
Total	....	230,179	....	5,783,210	$3,463,936.58

SUMMARY OF DEVELOPMENT (NO. 3 SHAFT)

	Feet
Drifts	5,542.3
Crosscuts	3,798.3
Raises	1,539.6
Winzes	4.5
Total	10,884.7

This work was done in 182 working places on the 11 mine levels. The total footage now completed at No. 3 shaft is 58,450 feet, or over 11½ miles, with a production of 100 ounces of silver per foot.

SOURCES OF ORE FROM MINE

	Tons	Grade, ounces	Total, ounces
Development	5,615	8.4	47,144
Stopes	39,687	21.3	845,615
Total	45,302	19.7	892,759

WASTE ROCK

	Tons
To surface	18,355
To filled stopes	9,776
Total	73,433

MILLING

	Tons	Ounces per ton	Total, ounces
Ore treated from mine	45,302		
Silver recovered		18.35	831,307[1]
Silver in tailings		1.36	61,452
Total		19.71	892,759

[1] Smelter returns.

CONCENTRATES PRODUCED

	Pounds	Ounces
Metallics		2,660
Jigs	164,018	316,859
Sands	302,668	483,728
Slimes	56,847	15,533

OPERATING COSTS

	Total cost	Cost per ton	Cost per ounce
Development	$132,867.27	$2.933	$0.160
Mining	64,299.80	1.419	.077
Tramming and hoisting	28,545.89	.630	.034
Milling	50,754.72	1.120	.061
Shipping	8,212.37	.181	.010
Smelting and refining	14,710.05	.327	.018
General expenses, mine	16,355.55	.361	.020
Corporate legal transfer and administration, Toronto office expenses	15,911.68	.351	.019
General maintenance	3,058.74	.067	.004
Insurance and miscellaneous	5,618.19	.124	.007
Total	$340,334.26	$7.513	$0.409

MILLING COSTS

	Labour	Supplies	Power	Total	Cost per ton
Conveying to mill	$3,075.86	$604.75	$200.38	$3,880.99	$0.086
Crushing	2,192.17	1,657.39	1,574.00	5,423.56	.120
Jigging	1,412.00	1,207.23	1,252.69	3,871.92	.085
Ball-milling	5,422.88	5,281.10	4,688.57	15,392.55	.340
Tabling	5,112.82	547.52	2,134.05	7,794.39	.172
Drying and bagging	2.29	151.90	803.75	957.94	.021
Water supply	432.82	41.09	639.52	1,113.43	.025
Heating	517.11	1,190.77		1,707.88	.038
Tailings disposal	3.52	60.79		64.31	.001
Repairs and maintenance	4,467.20	417.88		4,885.08	.108
Supervision and assaying	5,066.09	460.85	135.73	5,662.67	.123
Total	$27,704.76	$11,621.27	$11,428.69	$50,754.72	
Cost per ton	$0.611	$0.256	$0.253		$1.120

Development

An extensive programme of exploration and development was carried out during the first three quarters of the year, 9,340 feet of crosscutting and drifting and 1,540 feet of raising being done. During the last three months of the year, the price of silver having dropped abruptly, development expenditures were cut and the work confined to the most favourable areas. Some minor ore shoots were developed during the year. No ore was found on the deep 850-foot level. These erratic ore bodies require exploration of as many favourable chances as possible at a minimum of cost, favourable results in some areas paying for unfavourable results in other areas and also yielding a profit on the whole. The present low price of silver reduces the number of favourable chances, since three ounces of silver now sell for the price previously received for two ounces. Ore must therefore grade 50 per cent. higher in silver to be worth as much as formerly. Nevertheless, bonanza silver ore bodies, such as have been known in this locality and others which may yet be found, can be worked at a profit.

Capitol Mines

The Capitol Silver Mines, adjacent to your property, having been taken over, exploration there has been commenced. An electrically driven plant, consisting of an 1,100 cubic foot air compressor, double-drum electric hoist, electric pump, and drilling equipment was put in at the Capitol shaft on claim H.S. 351. The capital cost of this equipment and connecting electric power lines was $25,000. The shaft has now been pumped out and crosscutting started on the 800-foot level. The first part of the crosscutting will be in the Keewatin formation, in which has been found rich silver veins at Cobalt and South Lorrain. The crosscut will be driven into an area of the underlying diabase sill where the chances of finding payable silver veins are excellent.

New Plant and Equipment

In addition to the equipment purchased for the Capitol shaft, an expenditure of $2,177 for plant and equipment was made at the main workings. This, however, paid for itself in lower operating costs during the year. The Diesel engine power plant in use before the present electric power was secured was sold.

Milling

The mill handled an extra half month's tonnage during the year, although the total costs of milling were lowered. The grade of ore milled was lower than during the previous year.

General

Total operating costs were again reduced, but due to the lower grade of ore and to the very low price of silver during the last part of the year, profits were less than those of the previous year. A substantial profit was, however, made. The maintenance of milling and profits depends on the results of development, which continues on a reduced scale at the main workings, and on the results of the Capitol shaft exploration, which is being actively extended to a very favourable area.

F. L. Chitty

The Badger mine in Coleman township, district of Timiskaming, was operated under lease by F. L. Chitty.

High-grade ore, containing 219 ounces of silver, was shipped to Deloro.

E. H. Clemens

E. H. Clemens operated the Coniagas mine in Coleman township, district of Timiskaming, under lease throughout the year, employing 12 men.

Fifty-four tons of ore were mined, and a shipment of 53.57 tons, containing 309,674 ounces of silver, was made.

Cobalt Contact Mines, Limited

The Cobalt Contact Mines, Limited, operated their properties in Bucke township, district of Timiskaming, with a force of 20 men during the year. The officers and directors of the company are: J. M. Aitken, president; Walter H. Coles, vice-president; James A. Stewart, secretary; Sir A. C. Fitzgeorge, Frank C. Loring, H. F. Coombs, directors. J. M. C. Dunlop is mine manager.

The development for the year comprised: 585 feet of drifting, 155 feet of crosscutting, and 120 feet of raising. The work was all done on the 300-foot level. During the year 143.12 tons of ore was shipped containing

66,194 ounces of silver and 21,988 pounds of cobalt. Also 1,419 tons of mill rock were shipped to the Cobalt Reduction Company. This rock contained 33,848 ounces of silver, making a total production of 100,042 ounces.

Cobalt Kittson Mines, Limited

The Cobalt Kittson Mines, Limited, has an authorized capital of $5,000,000 in shares of $1 par value. The officers are: J. H. Paré, president; W. H. Mitchell, secretary-treasurer. The directors are: David Champaux, Wilfrid Duclos, A. Nadeau, P. Dubuc, and A. J. Pidgeon. The head office is at 70 St. Paul Street, Quebec, Que.

The property in Kittson township, district of Timiskaming, was operated continuously during 1929, a working force of 10 men underground and 15 on the surface being employed.

Development work consisted of: 178 feet of shaft-sinking, 326 feet of crosscutting, 371 feet of drifting on the 450-foot level, and 60 feet of drifting on the 598-foot level. A storehouse, stable, and power-house were built.

A. Nadeau was in charge of operations until June 1, 1929, and was succeeded by A. J. Pidgeon.

Friday Mines, Limited

Friday Mines, Limited, operated their property in the township of South Lorrain, district of Timiskaming, from February to December, 1929, with a force of 10 men. The officers and directors of the company are: J. R. Sproat, managing director; R. C. Vokes, G. A. Beirkamp, C. H. Gray, and W. H. Schaffer. The head office of the company is at Timagami, Ont.

The development work for 1929 was as follows: a two-compartment shaft was sunk 156 feet; and 201 feet of drifting and 54 feet of cross-cutting was done on the 80-foot level.

Keeley Silver Mines, Limited

Keeley Silver Mines, Limited, has a capital of 2,000,000 shares of $1 par value.

The officers and directors of the company are: F. H. Hamilton, president; W. H. Stafford, vice-president; L. Ehrlich, John H. Black, R. T. Shillington, E. Turk, and A. S. Hamilton, directors.

W. J. Dobbins is manager, and 96 men are employed at the mine in South Lorrain township, district of Timiskaming.

The manager's report for the fiscal year ending February 28, 1929, is as follows:—

Summary of Underground Operations

During the year, the following underground development has been carried out:—

	Feet	Cost per foot
Drifting and crosscutting	9,233.5	$13.54
Raising	1,546	16.03

Some 16,032 tons of ore was hoisted. Of this amount, 14,770 tons was taken from the stopes; the remainder came from development.

Results of Development

As indicated by the foregoing figures, a large amount of crosscutting, drifting, and raising has been performed during the year on the upper contact. This was carried out in order that all possibilities in that area might be exhausted. As a result of this work, several small shoots of ore were opened up, which while in no case large, yet in total were sufficient to carry on production.

There is still some work to be performed in this section with possibilities of some further ore still remaining.

In August, 1928, by arrangement with the Mining Corporation of Canada, Limited, exploration of the lower contact of the diabase sill was commenced through the workings of the adjoining Frontier property at the 1,400-foot level. This development has been continuous since that date, and small patches of silver have been found from time to time.

While these occurrences have been decidedly encouraging in that they give proof of mineralization, no ore body of commercial size had been developed at the close of the fiscal year.

Mill Statistics

During the year, 13,147 tons of ore was milled. Abbreviated statistics are as follows:—

Ore milled	13,147	tons
Heads, average	27.7	ounces
Tails, average	3.9	ounces
Extraction, average	85.8	per cent.
Average running time	85.1	per cent.

Production

Production for the year (based on actual smelter returns) was as follows:—

	Pounds, net	Silver, ounces	Cobalt, pounds
Picked ore	225,532	367,487.46	47,289
Concentrates	766,993	317,509.54	53,600
Total	992,525	684,997	100,889

The corresponding figures for the silver and cobalt produced during the previous year were 994,582.75 ounces and 92,962 pounds, respectively.

PRODUCTION DURING PREVIOUS YEARS

	Pounds, net	Silver, ounces	Cobalt, pounds
1913	322	872.7	....
1914	2,327.4	3,183.03	....
1918	145,048	39,557.25	1,061
1919	31,766	4,565.82	3,160.3
1920	119,770	8,253.44	9,896.86
1921	676,411.5	313,230.88	60,566.72
1922 and first 2 months 1923	2,286,497	1,146,961.56	196,927
Fiscal year, 1923-24	1,973,832.75	1,600,739.68	171,357
Fiscal year, 1924-25	2,668,241.75	1,880,351.88	228,450
Fiscal year, 1925-26	2,077,548	1,514,407.48	181,054
Fiscal year, 1926-27	2,064,742.5	1,640,007.96	185,830
Fiscal year, 1927-28	1,203,207.5	994,582.75	92,962
Total	13,249,714.4	9,146,714.43	1,131,264.88
Fiscal year, 1928-29	992,525	684,997	100,889
Total production to February 28, 1929	14,242,239.4	9,831,711.43	1,232,153.88

COST OF PRODUCTION

(Based on 13,228 tons of ore treated, producing 684,997 ounces of silver)

	Total cost	Cost per ton	Cost per ounce
Development	$150,707.94	$11.39	$0.220
Ore extraction	68,379.13	5.17	.100
Ore sorting	7,610.02	.58	.011
Milling	27,291.04	2.06	.040
Shipping and marketing	34,954.42	2.64	.051
Administration	27,852.87	2.11	.041
General maintenance	14,245.12	1.08	.021
Head office expense	9,331.30	.71	.013
Corporate expense	21,292.75	1.60	.031
Taxes	480.00	.04	.001
Total	$362,144.59	$27.38	$0.529

Ore Reserves

While no calculation of ore reserves has been attempted, there still remains a sufficient amount of high-grade and mill rock in the mine to maintain the present rate of production for a few months.

J. H. McLeod and C. W. Price

J. H. McLeod and C. W. Price operated the Foster mine in Coleman township, district of Timiskaming, under lease, throughout 1929.

Ore and bullion having a value of $4,236 were shipped. The cobalt content of the ore was valued at $1,376.

Three men were employed.

George Martin

The Crown Reserve mine in Coleman township, district of Timiskaming, was leased to George Martin.

Ore and metallics valued at $6,878 were shipped to the Nipissing mill.

Mining Corporation of Canada, Limited

The Mining Corporation of Canada, Limited, has an issued capital of $8,300,250 in shares of $5 par value. The directors and officers of the company are: J. P. Watson, president; W. R. P. Parker and G. M. Clark, vice-presidents; E. H. Rose, J. P. Watson, A. B. Stodart, C. E. Trafford, directors. M. F. Fairlie is managing engineer, and G. C. Ames is secretary-treasurer.

The average number of men employed at Cobalt was 150, of whom 40 men were employed in the mill of the Cobalt Reduction Company, a subsidiary of the corporation. The working force in South Lorrain at H. R. 64 averaged 30 men.

The year's operation resulted in a net profit of $478,497.07. Two dividends of $207,506.25 were declared. The production from the Cobalt mines of the corporation was greater than in 1928, but the total production was less, owing to the cessation of operations at the Frontier mine, South Lorrain. Total production was 985,249 ounces in 1929, against 1,132,603 ounces in 1928. In the Cobalt mines the estimated ore reserves were 22,000 tons containing 500,000 ounces of silver.

The following is taken from the managing engineer's report for the year 1929:—

Production

Silver production for the year was almost entirely confined to the Cobalt properties; exhaustion of the ore bodies at the Frontier and Crompton mines at South Lorrain having compelled discontinuance of work early in the year.

As a result, total production declined from 1,313,958 ounces to 985,249 ounces, although an increase from 918,266 ounces to 970,954 ounces was attained at Cobalt.

Continuously declining prices for silver throughout the year compelled the stopping of production on a number of veins, in order that the grade of mill ore might be maintained at a profitable level.

	Tons treated	Ounces produced
Cobalt properties	47,823	970,954
South Lorrain properties	75	14,295
Total	47,898	985,249

Included in the above production, the following tonnages were disposed of, without treatment at the local plant of the corporation: 17.62 tons of high-grade silver ore, containing 126,758.87 ounces; and 115.80 tons of low-silver high-cobalt ore, containing 15,757.92 ounces.

There was a decrease in the production of cobalt ore, the total weight of cobalt metal paid for being 21,413 pounds, as compared with 112,655 pounds in the previous year. This does not include cobalt metal contained in concentrates.

The details of tonnage treated, production, etc., from mill ore in 1929 are given in the table below:—

Tons of mill ore treated	47,753
Assay value, ounces per ton	20.57
Ounces contained	982,136.41
Ounces returned by Reduction Company	820,360.17
Percentage returned under contract	83.58

Past Production.—The table below gives the production by years from the mines of the corporation. The aggregate amounted to 47,001,234 fine ounces at December 31, 1929.

PRODUCTION IN OUNCES FINE SILVER TO DECEMBER 31, 1929

	Cobalt mines	South Lorrain mines	Total
Prior to 1908	118,616	....	118,616
Year ended December 31, 1908	633,516	....	633,516
“ “ “ 1909	442,254	....	442,254
“ “ “ 1910	471,965	....	471,965
“ “ “ 1911	1,777,002	....	1,777,002
“ “ “ 1912	2,827,826	....	2,827,826
“ “ “ 1913	3,784,718	....	3,784,718
January 1, 1914, to March 31, 1914	866,622	....	866,622
April 1, 1914, to December 31, 1914	3,185,124	....	3,185,124
Year ended December 31, 1915	4,563,956	....	4,563,956
“ “ “ 1916	4,457,441	....	4,457,441
“ “ “ 1917	4,485,542	....	4,485,542
“ “ “ 1918	1,708,252	....	1,708,252
“ “ “ 1919	1,230,653	....	1,230,653
“ “ “ 1920	1,664,018	....	1,664,018
“ “ “ 1921	1,226,717	....	1,226,717
“ “ “ 1922	1,462,269	....	1,462,269
“ “ “ 1923	727,115	1,333,334	2,060,449
“ “ “ 1924	851,280	521,878	1,373,158
“ “ “ 1925	898,008	1,134,097	2,032,105
“ “ “ 1926	1,105,456	1,104,597	2,210,053
“ “ “ 1927	1,217,180	902,591	2,119,771
“ “ “ 1928	918,266	395,692	1,313,958
“ “ “ 1929	970,954	14,295	985,249
Total	41,594,750	5,406,484	47,001,234

Mining Operations

Cobalt.—As in the past few years, the greater portion of mill tonnage was supplied from the Cobalt Lake property, lesser amounts coming from the McKinley-Darragh, Townsite, City of Cobalt, and Buffalo.

Extraction of ore on the lower levels of the Cobalt Lake and in the outlying sections of the other mines was finally completed, and mining operations latterly have been confined largely to upper levels.

Recent work on the Buffalo and Nancy Helen properties has resulted in mill-grade ore being developed, although the tonnage is limited.

While a small amount of high-grade silver ore was produced, there is little hope of this being continued and a further drop in the price of silver will make profitable operation on mill-grade ore difficult.

South Lorrain.—The following shipments of ore represent the production of the Frontier and Crompton properties for the year: 56 tons of mill ore with head assay of 15.20 ounces and silver content of 851.20 ounces; 18.82 tons of cobalt ore, assaying 75.98 ounces and containing 1,429.97 ounces; 0.21 tons of high-grade ore, containing 2,453.10 ounces of silver. In addition, 9,688.03 ounces were included in the year's production, being adjustment of smelter returns on shipments outstanding at the end of 1928.

The silver content of all classes of ore from the Frontier and Crompton properties was 14,422.30 ounces, as compared with 405,596.23 ounces for the previous year.

Practically no work was done at these properties during the year, following the final extraction of ore in the previous year. A somewhat improved demand for cobalt ore, together with higher quotations on this metal, will permit the mining of some remaining ore of this type. It is quite likely that a small tonnage of high-grade silver ore will be produced incidentally in carrying on this work. Operations will be limited, and no exploration work will be attempted.

Work is still being done by the corporation, under contract with the Keeley Silver Mines, in exploration of the lower levels of the latter property.

Fire destroyed the Frontier compressor house and three compressors, with loss fully covered by insurance.

On claim H.R. 64, the centre of a group controlled by the corporation, extensive exploration was done. Sinking was completed to 420 feet and a level established at 406 feet. At this horizon, near the sedimentary-Keewatin contact, drifting, crosscutting, and diamond-drilling were done. Calcite veins, one of them carrying cobalt ore, were proved to exist, but commercial silver values were not developed and work was discontinued for the present.

Sudbury.—In this district, a large area, totalling nearly 10,000 acres and consisting of groups of claims located at intervals around the outer edge of the norite intrusive, is held by the Mincor Exploration and Development Company, Limited, a subsidiary of the Mining Corporation of Canada, Limited. During the year preliminary geological mapping and prospecting was completed on all claims. Several promising areas have already been indicated, the importance of which will be determined by diamond-drilling, now in progress.

Patricia District.—Claims staked for the corporation in the Shonia and Pickle Lake areas, as well as east of Lake Nipigon, did not justify development and were allowed to lapse.

Northern Ontario.—Prospecting parties, in the employ of the corporation and working in selected areas failed to discover anything of importance in the northern sections of this province.

Ore Reserves

At the Cobalt properties, approximately 22,000 tons of ore remain in reserve with silver content of approximately 500,000 ounces. With the price of silver below 45 cents per ounce, it is quite possible that part of the above tonnage cannot be extracted profitably.

COBALT REDUCTION COMPANY, LIMITED

Concentrating Plant.—This plant ran 363 days during the year. The stamps ran 312,989 out of a possible 318,467 stamp-hours, or 98.28 per cent. of the possible running time. The tonnage of mill ore treated in the low-grade plant was 50,933 against 57,969 tons in 1928. This tonnage consisted of:—

	Tons
Silver ore from the mines of the Mining Corporation of Canada, Limited	47,753
Silver ore purchased from sundry shippers	2,770
Total silver ore	50,523
Cobalt ore from sundry shippers (concentrate returned)	410
Total	50,933

Comparative details of concentration treatment for 1929 and 1928 follow:—

	1929	1928
Tons treated	50,523.00	57,969.00
Average assay	22.01	21.06
Ounces contained	1,111,917.95	1,220,992.25
Tons concentrate produced	381.24	424.68
Average assay	1,608.86	1,651.30
Ounces contained	613,363.28	701,273.76
Percentage of extraction by table concentration	55.16	57.43

Flotation Plant.—All the slime produced by crushing and grinding, and the table tailing (after regrinding in tube mills), was treated by flotation.

Details of tonnage, extraction, etc., are given below:—

	1929	1928
Tons of slime treated	50,141.69	57,544.05
Average assay	9.94	9.03
Ounces contained	498,554.67	519,718.49
Tons of flotation concentrate produced	558.00	745.28
Average assay	700.73	586.18
Ounces contained	391,009.00	436,867.00
Percentage of extraction	78.43	84.06

SUMMARY OF MILLING OPERATIONS

	1929		1928	
	Total	Extraction	Total	Extraction
		per cent.		per cent.
Tons of ore milled	50,523.00	....	57,969.00	....
Average assay	22.01	....	21.06	....
Ounces contained	1,111,917.95	....	1,220,992.25	....
Table concentrate produced, ounces	613,363.28	55.16	701,273.76	57.43
Flotation concentrate produced, ounces	391,009.00	35.17	436,867.00	35.78
Total ounces produced	1,004,372.28	90.33	1,138,140.76	93.21

General Costs.—The total cost of operations was $187,782.29 against $211,490.63 in 1928. The cost of marketing the table and flotation concentrate produced, including freight, smelter treatment and refining charges, value of smelter deduction, etc., is included under "Operation" in the table below and amounted to $58,451.79 in 1929, or $1.157 cents per ton of ore treated.

TOTAL COST OF OPERATION

	Labour	Material	Other	Total	Per ton
Administration and general	$6,541.25	$741.34	$4,813.74	$12,096.33	$0.237
Operation	48,339.79	29,052.69	90,753.72	168,146.20	3.302
Head office	....	....	7,539.76	7,539.76	.148
Total cost of operation	$54,881.04	$29,791.03	$103,107.22	$187,782.29	$3.687

Earnings.—The gross earnings were made up of customs charges to the Mining Corporation of Canada, Limited, and subsidiaries and treatment charges on purchased ores, etc.

The operating profit was:—

By earnings	$223,915.85
Less total cost	187,782.29
Profit at plant	$36,133.56

There were no capital expenditures during the year.

Net Profit.—The net profit was:—

By profit at plant	$36,133.56
Written off plant	34,436.68
Total	$1,696.88

The above amount was paid out in dividends to the Mining Corporation of Canada, Limited.

Morrison Mines, Limited

Morrison Mines, Limited, operated their property during the six months ending December 31, 1929, in the township of Nicol, district of Timiskaming, with a force of 12 men. The officers and directors of the company are: Horace F. Strong, president and managing director; Lt.-Col. Jas. Cunningham, secretary-treasurer; Joseph Montgomery, vice-president; H. D. Fripp and T. F. Ahearn, directors.

The managing director's report for the year ending December 31, 1929, is as follows:—

On July 2, preparatory work was commenced at the mine, and by July 11 the water was removed down to and including the 300-foot level. Since that date active exploration has been maintained constantly and the following work accomplished:—

	Drifting	Cross-cutting	Shaft-sinking	Raising	Sumps
	feet	feet	feet	feet	feet
175-foot	230	70	....	5	....
300-foot	....	....	125	....	10
425-foot	124	128	....	....	....
Total	354	198	125	5	10

In the 230 feet of drifting on the 175-foot level, silver was encountered for a length of 65 feet with one section 15 feet in length which would approximate 25 ounces grade over a 4-foot stope width.

The shaft was scaled from top to bottom and sunk from the 300-foot level to a depth of 425 feet. On the 300-foot level, 10 feet of water sump was cut to permit sinking.

While deepening the shaft a vein was encountered dipping into the shaft from the north side at a depth of about 380 feet. This vein had a width of one inch where exposed in the crosscut on the 300-foot level. At the bottom of the shaft it is showing at the south side with a width of 2 inches. This vein showed silver in several places, but cannot be classified as ore.

Crosscutting to the northwest a distance of 90 feet cut a vein which, it is reasonable to assume, is the downward continuation of a vein or veins exposed on the upper levels, and which made good mill ore with a little high-grade on the winze level approximately 55 feet higher up. When cut on the 425-foot level this vein showed high-grade ore in the floor and to a height of 4 feet above the floor. Drifting to the east showed this shoot to extend for 28 feet in the floor and 5 feet in the back at the east end. This shoot should average 2 inches of 3,000-ounce ore. A cross-vein running north carries ore for 12 feet or more. Drifting to the west showed lean ground for 20 feet followed by a shoot 10 feet long in back and 15 feet in floor. This was followed by 10 feet of lean ground but with high-grade in the face, as of January 1.

Since January 1 and up to date of January 15, further development has made high-grade, and you are fairly safe in accepting a total length of 80 feet, out of 150 feet of drifting on the 425-foot level, which should average 50 ounces per ton over a stope width of 4 feet.

All plant and equipment have been maintained in excellent condition, advantage being taken of the Christmas shut-down to overhaul the compressor and hoist. Power interruptions, while frequent in the summer, were not of long duration and, on account of so many transformer losses in the Gowganda camp by fire caused by lightning, we adopted the precaution of shutting down and pulling the line switches during severe thunderstorms. All Government requirements such as Workmen's Compensation returns, supplying of statistics, cable tests, etc., have been rigidly attended to at the proper times.

All expenses at the property have been kept down to the lowest possible point commensurate with competent work, and considering the modest scale of this work I believe you will consider the efficiency ratio quite high. All charges at the mine to the end of December total $20,588.89, which includes supplies on hand in excess of $1,200. These charges have all been met, with the exception of current accounts, totalling about $1,000.

With the satisfactory developments now making on the 425-foot level, it is greatly to be hoped that finances can be arranged to continue this development, carry the shaft to 500 feet, and develop at that horizon. Notwithstanding the fact that the silver market is the worst in history, I believe that your property can be made to produce a satisfactory return on investment.

Nipissing Mining Company, Limited

Nipissing Mines Company, Limited, has a capital of 1,200,000 shares of $5 par value. The directors of the company are: E. P. Earle, president and treasurer; Alexander Fasken, vice-president and secretary; Richard T. Greene, August Heckscher, C. W. Nichols, and Hugh Park, directors. The head office is in the Excelsior Life Building, Toronto, and the New York office is at 165 Broadway.

The operating company is the Nipissing Mining Company, Limited, with a capital of 2,500 shares of $100 par value. The officers and directors of the company are: Alexander Fasken, president and secretary; E. P. Earle, vice-president and treasurer; Richard T. Greene, C. W. Nichols, and Hugh Park, directors. The operating officials are: Hugh Park, general manager, and E. V. Neelands, manager.

The net value of Nipissing shipments in 1929 was $813,164.27, and the net income of the operating company was $164,176.41. During the year $360,000 was paid in dividends, making a total of $29,400,000, or $24.50 a share. The operating company's surplus at the end of the year was $3,492,437.10.

The average number of men employed at the property at Cobalt, Coleman township, district of Timiskaming, was 190 men.

The general manager reports as follows for the year 1929:—

Summary of Results

The production of silver for the year was 1,545,000 ounces, a decrease of 364,000 ounces from 1928. The cost per ounce was 37.81 cents, a reduction of 4.44 cents. The ounce production was 81 per cent. of the amount produced in the previous year.

The net value of bullion, ore, and residue shipped was $813,000, a decrease of $354,000, due partly to the fall in the price of silver. The tons of ore treated at the mill were 18,000 less than in 1928; the head assay was 35.38 ounces per ton, an increase of 4.7 ounces.

Notwithstanding a decrease of $222,000 in operating expenses, the operating profit shows a decrease of $190,000, due in part to the decline in the price of silver.

The price of silver was the most discouraging feature of the year. A constantly falling market, starting at 57.5 cents in January and ending at 46.5 cents in December, with an average of 52.99 cents for the year, was 5.19 cents lower than the average price of 58.18 cents in 1928. The variation during the year was 11 cents, and the seriousness of the decrease is reflected in the operating profit. Surplus also was affected by this decrease to the extent of $125,000, due to the inventory of December 31, 1929, being valued at the low closing price for the year. Further price recessions were made in 1930, a new all-time low of 39.625 cents being recorded on March 4.

Operating results were better than anticipated at the beginning of the year, particularly ounces produced and decreased cost of production. The low price of silver, however, practically wiped out the advantages accruing from these results.

Operations at Cobalt continued in the usual manner, work being carried on at several shafts. The most important new development was encountered at shaft No. 73, where further work on an old vein developed an extension which produced a large proportion of the year's production and directly accounted for the increased head assay of the ore treated at the mill. It has every appearance of repeating its performance during 1930. Favourable developments were also obtained at other shafts, particularly shafts Nos. 12 and 63. As a whole, however, production continued to be derived from a number of small and generally low-grade veins situated in widely separated parts of the property. Ore reserves are estimated at 13,000 tons, containing 500,000 ounces, a decrease of 4,000 tons and 96,000 ounces.

SHIPMENTS IN 1929

	Tons	Silver, fine ounces	Net value
Silver bullion	46.928	1,367,062.96	$722,721.32
Residue and ore	945.841	64,109.67	90,798.15
Total shipments	992.769	1,431,172.63	$813,519.47
Less custom bullion	.024	685.28	355.20
Shipments of Nipissing product	992.745	1,430,487.35	$813,164.27

PRODUCTION IN 1929

	Silver, fine ounces	Gross value	Net value
Shipments in 1929	1,430,487.35	$818,953.25	$813,164.27
On hand at mine, December 31, 1929	1,140,353.11	726,518.58	717,223.06
Total	2,570,840.46	$1,545,471.83	$1,530,387.33
On hand at mine, December 31, 1928	1,025,693.30	797,046.63	784,709.97
Nipissing production	1,545,147.16	$748,425.20	$745,677.36

SUMMARY OF PRODUCTION

	Total	Per cent.
Gross value of production	$748,425.20	100.00
Total cost of production	584,248.79	78.06
Profit on operations at Cobalt	$164,176.41	21.94

SOURCES OF PRODUCTION

	Tons
Shaft No. 19	9,601
Shaft No. 49	10,059
Shaft No. 63	16,917
Shaft No. 73	8,687
Shaft No. 92	457
Total	45,721

The various products treated in the high grade plant were:—

HIGH-GRADE ORE TREATMENT

	Tons	Assay	Ounces contained
Concentrate	555	1,820	1,010,029
By-products	24	2,693	64,638
Total	579	1,856	1,074,667

The refinery treated precipitate and custom bullion containing 1,424,974 fine ounces. Shipments of bullion amounted to 1,367,063 fine ounces; shipments of residue amounted to 836 tons.

LOW-GRADE MILL

	Tons	Assay	Ounces contained
Ore treated	45,421	35.38	1,606,948
Recovered in products:			
Precipitate	20	26,038	520,753
Coarse concentrate	474	2,035	964,823
Fine concentrate	83	730	60,589
Total recovery			1,546,165

Average tailing, 1.35 ounces; recovery, 96.22 per cent. Twenty stamps ran 352 days, 17 hours, or 96.08 per cent. of possible running time. They crushed 128.78 tons per day, or 6.45 tons per stamp per day.

SUMMARY OF UNDERGROUND WORK

Shaft No.	Drifting	Crosscutting	Raising	Total	Stoping
	feet	feet	feet	feet	cu. yds.
19	1,120	662	99	1,881	3,075
49	331	183	45	559	2,062
63	794	1,118	148	2,060	4,695
73	92	203	33	328	2,546
92					410
Total	2,337	2,166	325	4,828	12,788

Diamond-drilling, 3,416 feet.

M. J. O'Brien, Limited

Miller Lake O'Brien Mine

The Miller Lake O'Brien mine, Nicol township, district of Timiskaming, is owned and operated by M. J. O'Brien, Limited. J. G. Dickenson is general manager, and H. G. Kennedy is manager. One hundred and seven men are employed.

The development in 1929 included 3,667 feet of drifting and 16 feet of sinking, and 18,082 tons were broken in stopes. There were hoisted 26,920 tons of ore, containing 1,289,118 ounces of silver. There were shipped during the year 39 tons of high-grade ore and 320 tons of concentrates.

O'Brien Mine

The O'Brien mine in Coleman township, district of Timiskaming, is owned and operated by M. J. O'Brien, Limited. J. G. Dickenson is general manager; W. A. O'Flynn is manager; and 160 men are employed.

Underground development for the year 1929 amounted to 6,623 feet of crosscutting and drifting, 369 feet of raising. There were 42,563 tons of ore stoped and 55,617 tons of ore hoisted, containing 2,051,162 ounces of silver. Concentrates shipped amounted to 1,620 tons.

Peterson Cobalt Mines, Limited

Peterson Cobalt Mines, Limited, has an authorized capital of $3,000,000 shares, divided into 100,000 shares of preferred and 2,900,000 of common. The officers and directors of the company are: W. A. Lamport, president; J. C. Haight, vice-president; P. M. Goff, secretary-treasurer. D. J. Russell is engineer. The head office of the company is at 301 Royal Bank Building, Toronto.

During the year 3,682 feet of diamond-drilling was done, with an average crew of 7 men.

Sandoe and Moyle

The Temiskaming mine in Coleman township, district of Timiskaming, was leased to Richard Sandoe and H. Moyle. Three men were employed.

Ore containing $7,812 in silver and $1,961 in cobalt was shipped.

H. Sequin

The Cobalt Comet mine in Coleman township, district of Timiskaming, was operated under lease by H. Sequin.

Eleven and a half tons of ore, having a cobalt content valued at $731, was shipped.

John W. Shaw and Associates

John W. Shaw and associates leased the Trethewey, Chambers-Ferland, and Aladdin mines in Coleman township, district of Timiskaming.

Ore and metallics having a value of $5,268 in silver were shipped to Deloro.

W. H. Smith

The Hudson Bay mine in Coleman township, district of Timiskaming, was operated under lease by W. H. Smith.

From 32 tons of ore mined and shipped, values of $1,322 in silver and $457 in cobalt were obtained.

Thomas E. Trembath and Partner

La Rose mine in Coleman township, district of Timiskaming, was operated under lease by Thomas E. Trembath and partner during 1929.

Ore and bullion valued at $17,727 were shipped to Deloro. The cobalt content of the ore was valued at $606.

Three men were employed.

TALC

Canada Talc Company, Limited

The Asbestos Pulp Company, Limited, was reorganized in 1929 and incorporated as the Canada Talc Company. The mine and mill were operated continuously during the year.

The ore body on the 6th level, at a depth of about 400 feet, was opened up, and the total production was from this body between the 6th and 5th levels. The vein, which averages 15 feet in width, with a maximum of 66 feet, was opened for a length of 300 feet.

The officers of the company are: W. S. Morden, Toronto, president; E. S. James, Belleville, vice-president; Roy Taylor, Madoc, secretary and manager.

Geo. H. Gillespie Company, Limited

The Henderson talc mine and mill, near Madoc, in Hastings county, was operated throughout 1929. The talc was mined at a depth of 310 feet, between the 4th and 5th levels. The vein has a width of about 33 feet.

An average of 25 men was employed. George H. Gillespie, Madoc, is manager.

METALLURGICAL WORKS

Algoma Steel Corporation, Limited

The blast furnaces of the Algoma Steel Corporation, Limited, at Sault Ste. Marie, were operated as follows during the year 1929:—

Furnace No.	Days in operation	Product
		tons
1	330	99,000
2	Idle all year	....
3	335	224,000
4	109	54,500

The only change in the blast furnace section during the year was the installation of four Freyn pressure gas-burners at No. 3 furnace.

Jas. H. Bell is blast furnace superintendent.

Deloro Smelting and Refining Company, Limited

The plant at Deloro operated throughout the year. Smelting operations were curtailed to some extent, owing to the decreasing supply of ore available; but an increase in the production of "Stellite" was made.

The officers of the company are: M. J. O'Brien, president; J. A. O'Brien, vice-president; F. A. Bapty, secretary-treasurer; S. F. Kirkpatrick, managing director. S. B. Wright is general manager, and R. A. Elliott is superintendent.

International Nickel Company of Canada, Limited

The refinery at Port Colborne was operated continuously throughout the year.

Steel Company of Canada, Limited

The Steel Company of Canada, Limited, at Hamilton operated the "A" furnace for 341 days during 1929, with a production of 100,466 tons; and "B" furnace for the entire year, with a production of 233,463 tons.

During the year an Ingersoll-Rand Turbo blower, of 55,000 c.f.m., and a Theissen gas-washer were installed.

The average number of men employed during the year was 140. R. A. Gillies is blast furnace superintendent.

MINING ACCIDENTS IN 1929

By

Chief Inspector of Mines, D. G. Sinclair, Toronto; Inspectors, R. H. Cleland, Timmins; E. C. Keeley, Kirkland Lake; G. S. Jarrett, Sudbury; A. R. Webster, Toronto.

Accidents during 1929

During the year 1929 at the mines, metallurgical works, quarries, clay, sand, and gravel pits regulated by the Mining Act, there were 2,444 accidents to employees reported to the Department of Mines up to January 15, 1930. Fifty-five fatalities, arising out of forty-eight separate accidents, were recorded.

These returns represent a decrease of 115 in the total number of casualties and a decrease of 30 in the number of men killed over the record of the preceding year, 1928. It should be noted, however, that the number of fatalities in 1928 was abnormally high due to the death of 39 men in the Hollinger mine disaster of that year.

The report shows a fatality rate of 2.89 per thousand men employed, which is 0.13 per thousand lower than the average rate for the past twenty-five years.

There were 126 non-fatal accidents per thousand men employed, which shows a decrease of 15 per thousand men from the rate in 1928.

The percentage of non-fatal accidents followed by infection decreased from 10.7 per cent. in 1928 to 6.9 per cent. in 1929.

Fatal Accidents

A comparison of fatal accidents for the past five years is given in the following table:—

Distribution	1925	1926	1927	1928	1929
Mines, underground	30	20	19	31	33
Mines, surface	1	3	4	2	2
Metallurgical works	2	3	3	4	2
Quarries	7	3	4	2	3
Clay, sand, and gravel pits	2	3	3	4	8
Total	42	32	33	43	48

By months the fatal accidents occurred as follows:—

Month	No.	Men killed
January	5	5
February	4	4
March	0	0
April	3	5
May	4	4
June	4	4
July	5	5
August	3	4
September	5	5
October	3	3
November	3	4
December	9	12
Total	48	55

Classifying the fatalities according to industries gives the following:—

Gold mines	17
Nickel mines	19
Silver mines	4
Copper-lead-zinc mines	1
Gypsum mines	1
Metallurgical works	2
Quarries	3
Sand, gravel, and clay pits	8
Total	55

ANALYSIS OF FATALITIES AT MINES, 1925-29

Cause	1925	1926	1927	1928	1929
	per cent.	per cent.	per cent.	per cent.	per cent.
Fall of ground	19.35	17.39	26	6.6	14.3
Run of ore or rock	....	....	17.4	5.3	11.9
Shaft accidents	19.35	26.09	21.3	9.3	14.3
Explosives	25.8	43.48	4.3	12	28.6
Miscellaneous, underground	29.03	....	8.69	64	28.6
Surface	6.45	13.04	21.7	2.6	2.3

TABLE OF FATAL ACCIDENTS IN MINES, METALLURGICAL WORKS, QUARRIES, AND GRAVEL, SAND, AND CLAY PITS, 1905-1929

Year	Persons killed at metallurgical works and mines	Persons employed at metallurgical works and producing mines	Persons employed at non-producing mines (estimated)	Total persons employed	Fatal accidents per 1,000 employed
1905	9	4,415	500	4,915	1.83
1906	11	5,017	750	5,767	1.9
1907	22	6,305	1,140	7,445	2.93
1908	47	7,435	1,750	9,185	5.11
1909	49	8,505	2,000	10,505	4.66
1910	48	10,862	2,000	12,862	3.73
1911	49	12,543	2,000	14,543	3.37
1912	43	13,108	2,000	15,108	2.84
1913	64	14,293	2,000	16,293	3.93
1914	58	14,361	1,500	15,861	3.6
1915	22	13,114	1,500	14,614	1.51
1916	51	14,624	2,000	16,624	3.07
1917	36	16,791	1,000	17,791	2.02
1918	32	14,726	500	15,226	2.1
1919	39	11,926	1,000	12,926	3
1920	29	10,486	1,000	11,486	2.61
1921	24	8,436	1,000	9,436	2.54
1922	30	9,500	1,500	11,000	2.72
1923	30	10,500	1,500	12,000	2.5
1924	40	11,000	1,500	12,500	3.2
1925	42	11,500	1,500	13,000	3.23
1926	32	11,500	1,500	13,000	2.46
1927	33	13,311	2,000	15,311	2.1
1928	85	15,787	2,000	17,787	4.76
1929	55	17,145	1,849	18,994	2.89

The comparative fatality rate per thousand men employed at mines, metallurgical works, quarries, clay, sand, and gravel pits is as follows:—

	Men employed	No. killed	Rate per thousand
Mines	12,507	42	3.35
Metallurgical works	3,817	2	.52
Quarries	1,820	3	1.65
Clay, sand, and gravel pits	850	8	9.41
Total	18,994	55	2.89

The occupation and nationality of the men killed at mines, metallurgical works, quarries, clay, sand, and gravel pits, are set out in the following table:—

Occupation	English-speaking	Pole	Ukrainian	Jugo-Slav	Finn	German	Lithuanian	Italian	Russian	Unknown	Total
Miner	6	1	2	1	6	....	1	1	....	....	18
Drill helper	1	1	1	2	....	....	....	....	....	....	5
Cage tender	....	....	....	....	....	1	....	....	....	....	1
Mucker	1	....	....	....	....	....	....	1	....	....	2
Timberman	....	....	....	....	2	....	....	....	....	....	2
Pumpman	....	....	....	....	....	....	....	1	....	....	1
Scaler	....	....	....	1	....	....	....	....	....	....	1
Trammer	....	1	....	....	....	....	....	....	....	....	1
Chute-blaster	....	....	....	1	....	....	....	....	....	....	1
Skip tender	....	....	....	....	....	....	....	....	1	....	1
Shaftman	1	....	....	1	2	....	....	....	....	....	4
Pipe fitter	1	....	....	....	....	....	....	....	....	....	1
Shift boss	....	....	....	....	....	....	....	1	....	....	1
Hoistman	1	....	....	....	....	....	....	1	....	....	2
Labourer	6	....	....	1	....	....	....	....	....	....	7
Crusherman	1	....	....	....	....	....	....	....	....	....	1
Locomotive fireman	1	....	....	....	....	....	....	....	....	....	1
Brakeman	1	....	....	....	....	....	....	....	....	....	1
Mechanic	1	....	....	....	....	....	....	....	....	....	1
Assistant superintendent	1	....	....	....	....	....	....	....	....	....	1
Truck driver	1	....	....	....	....	....	....	....	....	....	1
Farmer	....	....	....	....	....	....	....	....	....	1	1
Total	23	3	3	7	10	1	1	5	1	1	55

The ages of the men killed were as follows:—

17–20	21–25	26–30	31–35	36–40	41–45	46–50	Over 50	Total
1	8	17	14	6	5	2	2	55

Non-Fatal Accidents

The causes of non-fatal accidents at mines are shown in the following table:—

Cause	Surface	Underground	Total
Rock or ore at face	....	304	304
Rock or ore at chute	....	129	129
Fall of persons	58	154	212
Falling objects	47	135	182
Fall of rock or ore from face, wall, or back	....	106	106
Tramming	2	134	136
Crushed between two objects	30	104	134
Flying objects, sledging, etc	17	99	116
Nails or splinters	32	80	112
Drilling machines	....	91	91
Hand tools	36	50	86
Strain while lifting	19	56	75
Machinery	37	10	47
Running into or striking against objects	7	37	44
Cage, skip, or bucket	....	23	23
Explosives	3	17	20
Falling down shaft, winze, raise, or stope	....	16	16
Burns	13	1	14
Electricity	10	....	10
Gas	1	3	4
Explosion of carbide	4	3	7
Poisoning from cyanide, mercury, etc.	2	....	2
Unclassified	6	1	7
Total	324	1,553	1,877

The causes of non-fatal accidents at metallurgical works were:—

Falling objects	51
Burned by slag, matte or scrap	26
Fall of persons	20
Transportation	13
Crushed between two objects	12
Flying objects, sledging, etc.	11
Burns	9
Hand tools	8
Machinery	8
Strain while lifting	5
Nails or splinters	5
Cranes, ladles, hooks	4
Running into or striking against objects	4
Electric	3
Gas	1
Total	180

The causes of non-fatal accidents at quarries were:—

Handling material	56
Falling objects	30
Fall of persons	28
Flying objects, sledging, etc	20
Transportation	19
Strain while lifting	15
Crushed between two objects	14
Hand tools	12
Machinery	10
Fall of rock	9
Explosives	7
Nails or splinters	6
Burns	4
Hoists, derricks, elevators	2
Unclassified	5
Total	237

The causes of non-fatal accidents at clay, sand, and gravel pits were:—

Falling objects	19
Fall of persons	17
Transportation	11
Machinery	9
Crushed between two objects	7
Fall of material	5
Strain while lifting	5
Flying objects	5
Running into or striking against objects	5
Hand tools	4
Nails or splinters	3
Burns	3
Electric	1
Unclassified	1
Total	95

Infection

Records show that infection followed in 164 cases out of 2,389 non-fatal accidents in 1929.

Location	No. of accidents	Accidents followed by infection	Per cent. infection
Mines, underground	1,553	96	6.2
Mines, surface	324	35	10.8
Metallurgical works	180	7	3.9
Quarries	237	19	8
Clay, sand, and gravel pits	95	7	7.4
Total	2,389	164	6.9

Accidents from Explosives

Cause	Non-fatal		Fatal		Total	
	No. of accidents	Men injured	No. of accidents	Men killed	No. of accidents	Men killed or injured
Struck by rock from blast	9	9	1	1	10	10
Premature explosion	5	7	3	4	8	11
Delayed too long lighting fuse	2	2	2	3	4	5
Drilled into explosive	5	7	2	2	7	9
Returned to delayed blast	....	....	2	2	2	2
Handling explosives	3	4	1	1	4	5
Concussion from blast	1	1	....	....	1	1
Total	25	30	11	13	36	43

The following table shows the fatal accidents due to the use of electricity at mines, metallurgical works, and quarries during the past ten years:—

1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	Total
....	2	....	....	1	3	....	2	1	....	9

The voltage of the circuits on which the accidents occurred was as follows:—

Volts	No. of accidents
220	1
550	7
2,200	1
Total	9

Classifying the accidents according to the industry shows the following:—

Mines, surface	4
Metallurgical works	3
Quarries	2
Total	9

The causes of fatal accidents due to electricity during the past ten years were as follows:—

Failure to open circuits before working on apparatus	4
Defective temporary installation	1
Defective wiring	2
Water leaking on apparatus and ground wire disconnected	1
Touched live line on pole and fell to ground	1
Total	9

The following table shows the non-fatal electric burns during the past ten years:—

1920	1921	1922	1923	1924	1925	1926	1927	1928	1929
14	6	6	9	9	6	5	10	4	14

The causes of non-fatal electric burns during 1929 were:—

Arc when closing disconnecting switches	3
Opening disconnecting switches under load	2
Working on live circuit	2
Coming in contact with high-voltage circuit	2
Coming in contact with low-voltage circuit	2
Oil switch exploded	1
Compensator exploded	1
Closing disconnecting switch on short circuit	1
Total	14

Fire Caused by Electric Apparatus in 1929

A fire originated in the coils of a 150 h.p., 550-volt motor at the Levack mine of the International Nickel Company of Canada, Limited, at about 2.45 A.M., December 15.

The motor was driving a Symons crusher by a belt and was installed in a separate compartment, 9 feet square, with the roof 3 feet above the top of the motor. The building was constructed of corrugated iron, and the roof and walls were lined inside with wood. The floor was made entirely of concrete, with the wiring in conduit buried in the concrete.

The fire was confined to the insulation of the motor when first discovered and the motor was stopped by remote control. The smoke was too intense to permit entrance to the room, and there were no fire extinguishers close at hand. The flames from the motor ignited the roof and walls and spread rapidly to the crusher plant.

Four lives were lost in the shaft as a result of the fire, when four miners attempted to ride up in the bucket. The crusher plant, rock-house, and headframe were destroyed.

Prosecutions

The appeal by the Attorney-General for Ontario from the judgment of the Appellate Division of the Supreme Court of Ontario in the case of Rex *vs.* Baker was heard by the Supreme Court of Canada, February 5, 1929, Justices Duff, Mignault, Newcombe, Lamont, and Smith sitting on the appeal.

The decision of the Appeal Court, setting aside the findings of Police Magistrate McKessock, of Sudbury, was affirmed.

To give a brief summary of the previous proceedings in the case: Fred J. Baker, hoistman at No. 1 shaft, Frood mine, was charged before Magistrate McKessock with criminal negligence under Section 284 of the Criminal Code. The prosecution arose following an accident in the shaft when Baker overwound a skip on September 23, 1928.

The Police Magistrate found him guilty and sentenced him to a fine of $200 and costs or, in default, three months' imprisonment.

An appeal to the Supreme Court of Ontario resulted in the quashing of the magistrate's finding. The Supreme Court of Canada upheld the Ontario Court's judgment as outlined above.

Before Magistrate Atkinson, at South Porcupine, on February 21, E. Sirrila, a drill-runner at the Hollinger mine, was fined $10 and costs for a contravention of Regulation 25, Section 161, of the Mining Act, in that he "drilled within ten feet of a cut-off hole."

J. Kisil, a Pole, who had been in the employ of the International Nickel Company of Canada, Limited, at Creighton mine, was tried before Magistrate Thos. Stoddard, at Creighton, on October 31, on a charge that: "At the village of Creighton, in the district of Sudbury, on or about the 28th day of October, 1929, being under the influence of liquor, did go down to the 23rd level of the Creighton mine of the International Nickel Company of Canada, Limited, contrary to Subsection 219, of Section 161, of the Mining Act of Ontario, being part of Chapter 5 of the Revised Statutes of Ontario, 1927."

Magistrate Stoddard found the accused guilty and fined him $75 and costs, or three months in jail. Costs amounted to $35.50. Kisil elected to take the jail term rather than pay the fine.

Victor Lalonde was tried before Magistrate McKessock, at Sudbury, on November 1, in connection with a fatal injury to Kalle Hytanen. The accident occurred at the Frood mine of the International Nickel Company of Canada, Limited, on October 24.

The charge laid was that "Victor Lalonde, of the town of Sudbury, in the district of Sudbury, on or about the 24th day of October, 1929, did hoist one Kalle Hytanen in a skip used for hoisting material in a raise on the 2,000-foot level in the Frood mine of the International Nickel Company of Canada, contrary to Subsection (a), of Subsection 50, of Section 161 of the Mining Act."

Lalonde's own evidence given at the inquest was quite conclusive and he pleaded guilty to the charge. The straightforward way in which the accused gave his evidence at the inquest and the fact that he was of a type that the company officials considered worthy of re-employment, inclined the magistrate to leniency. Lalonde was sentenced to pay a fine of $20 and costs or one month in jail. He paid the fine. Costs amounted to $22.80.

Government Mine Rescue Station at Timmins

Pending legislation authorizing the erection of three central mine rescue stations in the Porcupine, Kirkland Lake, and Sudbury areas, an arrangement was effected by which a mine rescue station, in advance of such authority, was established in Timmins late in 1929 to afford a degree of protection until the whole scheme might become effective.

The arrangement provides that the station be financed through the Workmen's Compensation Board of Ontario out of assessments levied on the mines, while the equipment of the station, the selection of the personnel in charge of it, and all matters pertaining to the operation and maintenance of the station are under the control of the Chief Inspector of Mines.

This, in the main, follows the lines laid down in the proposed legislation covering the entire three stations, which are to be established in the province.

The Timmins station is housed in a tile building, 15 feet by 40 feet, erected as a lean-to to the municipal fire hall, and provides two rooms for storage of equipment and training purposes. The main room (15 feet by 28 feet) is used as a storage and lecture room and, in addition, contains the heating plant. While the second room (15 feet by 12 feet) is used as a "smoke room" in which training may be given in irrespirable atmosphere and is separated from the storage room by a gas-tight partition containing a long observation window through which the supervisor may observe at all times the action of the crew undergoing training in the smoke room.

Interior view of Timmins mine rescue station, showing part of the rescue equipment.

In the main the rescue equipment carried at the station consists of the following:—

12 sets of McCaa, 2-hour type, self-contained oxygen breathing apparatus.
12 All Service gas masks.
24 M.S.A. self rescuers.
2 M.S.A. carbon monoxide detectors.
1 Pyrotannic acid carbon monoxide detector and air sampling accessories.
2 Wolf Flame safety lamps.
12 model "F" Edison electric cap lamps.

In case of an emergency there are sufficient supplies to operate the apparatus until additional supplies can be obtained by express.

It is proposed to commence training of mine crews in mine rescue, first aid, and mine recovery operations as soon as a standard course of training can be decided on and drawn up.

At the time of writing, arrangements have been effected through the courtesy of the United States Bureau of Mines for a team composed of the inspectors of the Department of Mines, the supervisor of the Timmins station, and a representative of the McIntyre Porcupine Mines to take the U.S. Bureau of Mines training course at the Pittsburgh station of the bureau.

On the completion of the course, a schedule for training Ontario miners will be drawn up and the actual training of mine teams commenced.

Rescue team wearing McCaa 2-hour breathing apparatus, Timmins mine rescue station.

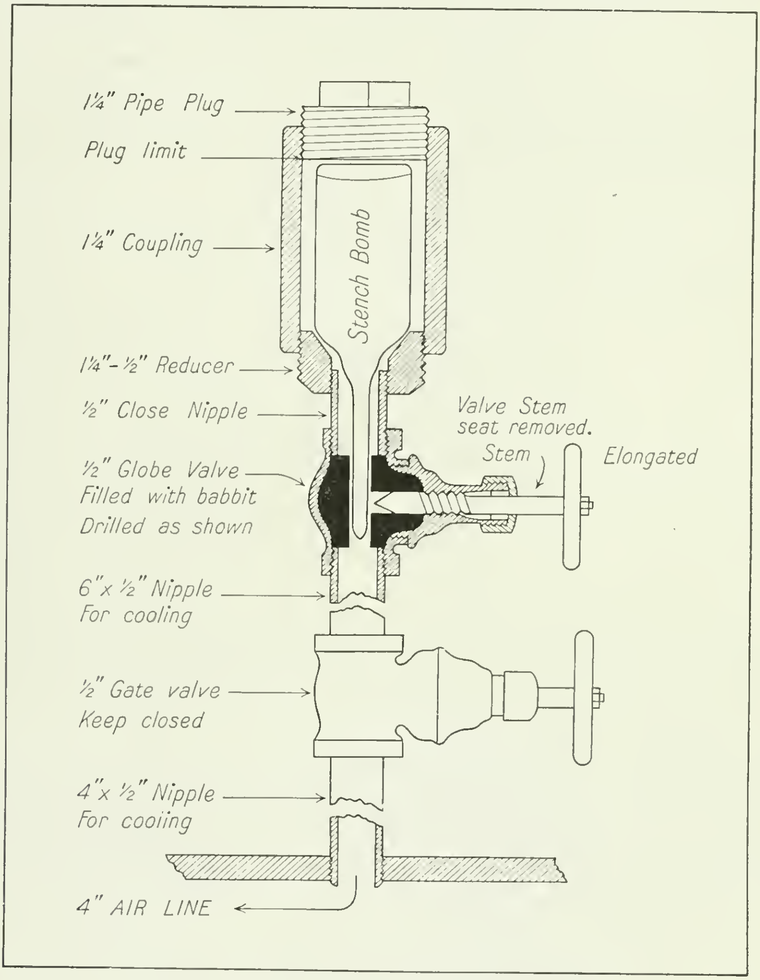
Stench Test at Vipond Consolidated Mines, Limited

The introduction of the stench, ethyl mercaptan, into the air lines, as a signal to underground workmen to vacate the mine, was tried under working conditions at the Vipond mine, Timmins, and the results obtained demonstrate the effectiveness of this warning signal.

The apparatus used for the introduction of the stench is illustrated by the accompanying sketch. It will be noted that the apparatus is made from standard pipe fittings. The modification of the valve for breaking the stench bomb can be accomplished at small cost and with few tools. Owing to the low boiling point of the ethyl mercaptan, it is essential that the pipe nipples used be of sufficient length to dissipate the heat from the air lines. The length shown in the sketch proved adequate with the apparatus installed forty feet from the compressors and on the mine side of the receivers, which point is essential. There are four of these injectors installed on two air mains and housed in a small box midway between the hoist-house and the shaft-house.

About two weeks before the test was made, a notice was posted to the effect that a trial of this warning signal would be made and asking the men to become familiar with the smell. They were also asked to record the time of detection of the stench and then proceed to the shaft. A small quantity of ethyl mercaptan was placed in the shaft-house, where, by turning a valve, it could be let into the atmosphere.

At the time of the test there were approximately sixty men underground engaged at their usual work. The mine has about nine miles of underground workings and ventilation is by natural air currents, except for the compressed air, which amounts to 1,800 cubic feet of free air per minute.


1¼" Pipe Plug
Plug limit
1¼" Coupling
Stench Bomb
1¼"-½" Reducer
½" Close Nipple
Valve Stem seat removed.
Stem
Elongated
½" Globe Valve Filled with babbit Drilled as shown
6"x ½" Nipple For cooling
½" Gate valve Keep closed
4"x ½" Nipple For cooling
4" AIR LINE

Stench bomb container and control valves (half-size).

Four bombs were used, each containing 12 c.c. of ethyl mercaptan. They were broken at intervals of twenty seconds, one in each of the four injectors as illustrated. Four minutes after the first bomb was broken a flash for the cage was received from the 866-foot level. Forty-seven minutes after the introduction of the stench all the men were out of the mine. Two crews of scalers failed to get the warning, but these men were far removed from operating drills. One of these men was warned by other workmen and one failed to receive any kind of warning.

Two hours after the stench was introduced the next shift went to work, and the atmosphere underground was quite clear.

The experience demonstrated that the stench was effective and entirely harmless.

The quantity of ethyl mercaptan injected into the air lines was roughly 20 c.c. for every 1,000 cubic feet of free air compressed per minute. It would perhaps be wise to use more; something like 30 c.c. would be a better quantity. It is essential that the introduction of the stench be spread over at least one minute of time. This insures a good distribution of stench in the air passing through the line. The four inexpensive injectors as used in this test insure the placing of the required quantity in the line over a given period.

The following are some notes of interest on the experiment:—

Time of breaking first bomb	1.47 p.m.
Time of breaking second bomb	1.47.20 p.m.
Time of breaking third bomb	1.47.40 p.m.
Time of breaking fourth bomb	1.48 p.m.

RECORD OF MEN COMING TO SURFACE

Working place	Time surface reached	Remarks
	p.m.	
866-foot	1.53	Men at pump station; no drill working.
200-foot	1.56	Men drilling in No. 200-H stope; strong odour.
1,000-foot	2.01	Muckers at station; no drills.
733-foot	2.03	Scalers in No. 709 stope; no drills.
500-foot	2.07	Drift; got stench at 1.57 p.m.; stayed to blast.
866-foot	2.05	Machine men in No. 802 raise.
600-foot	2.09	Sublevel; machine men and scalers.
400-foot	2.13	Men from No. 514 stope and No. 402-B drift.
400-foot	2.14	No. 426 stope; machine running; strong odour.
733-foot	2.30	No. 707-B stope; machine running but odour not strong.

Vipond side muckers warned Vipond side scalers, who reached the surface at 2.34 P.M. Scalers in No. 604 stope failed to get a warning of any kind. At the old Vipond shaft collar the warning came through a leak in the air line at 1.55 P.M. The natural air currents brought the warning to this upcast shaft at 2.03 P.M.

The Department of Mines is indebted to the Vipond mine, and especially the manager, Robert E. Dye, for making this test under working conditions. It has proved that an adequate warning can be given underground directly to 95 per cent. of the workmen. It also gives a fair estimate of the quantity of ethyl mercaptan necessary under metal mine conditions, as based on compressed air only.

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REPORT FOR 1929

OF

The Workmen's Compensation Board

ONTARIO

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1930

To His Honour William Donald Ross, Esq.,
Lieutenant-Governor of the Province of Ontario.

May It Please Your Honour:

The undersigned has the honour to present to Your Honour the Annual Report of The Workmen's Compensation Board of Ontario for the twelve months ended December 31, 1929.

Respectfully submitted,

William H. Price,
Attorney-General.

THE WORKMEN'S COMPENSATION BOARD

V. A. SINCLAIR, K.C., Chairman
H. J. HALFORD, Vice-Chairman
GEO. A. KINGSTON, Commissioner
N. B. WORMITH, Secretary

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REPORT FOR 1929

OF

THE WORKMEN'S COMPENSATION BOARD

ONTARIO

To His Honour The Lieutenant-Governor:

The Workmen's Compensation Board begs leave to submit its Report for the year 1929, being the fifteenth year of the operation of the Act.

GENERAL REVIEW

Premises

The Board's offices remain on the 12th floor of the Metropolitan Building, corner of Adelaide and Victoria Streets, Toronto.

Accidents

The year 1929 shows an increase in number of accidents over any preceding year. The reported accidents numbered 87,103, as compared with 79,398 in 1928, and 71,979 in 1927, an increase of nearly 10 per cent. over the preceding year. During the same period the provisional payrolls reported to the Board for the year showed a substantial increase, increasing from $503,392,000 in 1928 to $543,455,000 in 1929, and this increase appeared to be fairly general in all the classes, there being only two classes which did not show an increase in employment as indicated by increased wage expenditures, the two classes showing a decrease being Classes 1 and 23. The percentage of increase in wage expenditures compares very closely with the increased percentage in accidents, so that undoubtedly not only was there an increase in number of accidents but also an increase in amount of employment as indicated by the wage expenditures. The number of employers also showed an increase from 23,685 in 1928 to 24,078 in 1929.

As to the severity of accidents as indicated by the duration of disability or medical aid only being involved, the year's experience would show that of the accidents in Schedule 1 (where medical aid is paid by the Board) out of 68,195 accidents paid for during 1929, 33,955 involved medical aid only, or practically one-half of the total number of allowed cases in Schedule 1, and that 31,005 involved temporary disability only, while there were 2,884 cases in which permanent partial disability awards were made, and ten total permanent disability cases. Out of all cases, Schedules 1 and 2 and Crown cases, there were 452 deaths, as compared with 453 for 1928.

In 1929 the peak in numbers of accidents was during the month of July, there being 8,538, in previous years; August being usually the month showing the greatest number of accidents. This was the highest number of accidents shown in any month since the commencement of the Act.

Benefits

The total amount of benefits awarded under the Act during the year 1929 was $8,012,157.78, as compared with $7,067,946.93 in 1928. Out of the total benefits so awarded in 1929, $6,732,145.81 were in Schedule 1 industries, $655,671 in Schedule 2 industries, and $624,340.97 in Crown cases. The benefits awarded in Schedule 1 included $1,385,524.62 medical aid, which again shows a very large increase amounting to $219,017.08 over that paid in 1928. This is to some extent explained by the fact that the allowance paid to hospitals during the year was $3.00 per day to public hospitals instead of $2.50 as in the preceding year. The medical aid represents a little over 20½ per cent. of the total amount awarded for benefits in Schedule 1.

The total benefits awarded from the commencement of the Act to the end of 1929 amounted to $78,480,206.93, while the total accidents reported during the same period amounted to 806,410.

Average Rates of Assessment

Based on the provisional wage expenditure, the average rate of assessment in all classes in Schedule 1 would show a slight increase over 1928, being from $1.33 in 1928 to $1.35 in 1929.

Administration Expenses

The administration expenses for the year amounted to $341,083.58, as compared with $317,247.35 during 1928. This difference is nearly all accounted for by the normal increases in salary and by cost of the additional help taken on to handle the additional work entailed by practically 10 per cent. increase in number of accidents. The percentage of increase is much less than the increased percentage of accidents being handled. The percentage relation of administration costs to the amount of benefits awarded shows that the total administration expense for 1929 was 4.26 per cent. of the benefits awarded, as compared with 4.49 per cent. for 1928, and 4.66 per cent. in 1927. This administration expense was divided among Schedule 1, Schedule 2, and Crown cases, the percentage chargeable to Schedule 1 industries being 4.37 per cent. of the benefits awarded, and to those in Schedule 2 and Crown, 3.68 per cent.

During the year 275,009 cheques were issued, as compared with 245,540 during 1928, being a daily average of 917, as compared with 813 for the preceding year. About 5,000 pieces of mail are handled daily, and the average number of office callers is ninety-three a day.

In order to insure better acquaintance with and attention to long-standing cases and a better appreciation of permanent disability present, the Board has sent its Chief Medical Officer to various industrial centres for the purpose of making examinations of claimants who have long continued and serious disabilities or who are appealing from permanent partial disability awards. This practice has resulted in regular visits of our Chief Medical Officer to the cities of Windsor, Ottawa, and London, and claimants in the surrounding smaller places are seen at these centres. The Board considers that this results in much closer touch with the workmen and leads to checking up of treatment being rendered, and also a better appreciation of the extent of permanent disability present, and the results justify continuance of this practice.

Amendments

There were no legislative amendments passed during the session of 1929, but the Board, by regulation 99, approved by Order-in-Council on the 20th day of June, 1929, added to the list of compensable diseases that of chrome poisoning, an industrial disease due to increased use of chromium plating in industrial plants.

In pursuance of amendments made to The Mining Act in 1928 requiring the examination of all workmen employed underground in the mines in Ontario by a medical officer appointed under the provisions of The Workmen's Compensation Act, the Board appointed three medical examiners, Dr. N. H. Russell for the Porcupine area, Dr. A. E. Morgan for the Sudbury area, and Dr. R. W. McBain for the Kirkland Lake and Cobalt districts. The Act became effective on the 1st of January, 1929, and since that time these three doctors have examined about 7,500 miners during the year 1929, and shortly after the end of the year all miners in these areas had been examined at least once under the provisions of this Act. As their certificates require to be renewed every year, re-examinations are now taking place.

This has involved considerable expense, as X-ray equipments had to be either bought or leased, buildings rented for office purposes, and the salaries and expenses of these examining officers paid. The expense for salaries, rents, equipment and supplies during the year amounted to $51,320.55. In addition to this, $2,794.55 was paid for salaries and expenses of the Silicosis Referee Board, all of which were charged to the Silicosis Fund collected from the mine owners in Ontario.

This work is unquestionably very effective in preventing employment of workmen who are unsuited for such employment by reason of lung conditions, or prevents continuance of such employment to a point injurious to the health of the miners. The problem of silicosis is being dealt with in such a way as to very much lessen the impairment of the health of the miners by reason of this disease for the future, either by preventing entry into the employment of those whose lungs cannot withstand this complaint or by taking out of it those already so engaged whose health is becoming or has become impaired.

In addition to carrying out the work of examination, the Board as a matter of first aid has required the establishment of Rescue Stations in the mining districts. In collaboration with the Department of Mines there has already been established a rescue station with all modern equipment at Timmins, and a practical man has been placed in charge of this station who has since taken a special course in mine rescue work in the United States and who will have charge of training crews in the different mines for the purpose of handling this mine rescue equipment in cases of explosion or fires in connection with the operating mines. It is expected that during the year 1930 two more stations will be equipped, one at Sudbury and one for the Kirkland Lake and Cobalt district. The cost of these is being borne by the mining class.

Safety Associations

An increased amount has been spent by the Board during the year in connection with grants to safety associations, the total during the year being $127,638.98, as compared with $115,620.55 during 1928, divided as follows: Lumbermen's Safety Association, $21,233.33; The Ontario Pulp and Paper Makers' Safety Association, $12,200; the Industrial Accident Prevention Associations, $87,205.65, and the Electrical Employers' Association of Ontario, $7,000.

Accident prevention and safety work has been carried on with great enthusiasm by the different associations during the year, and more effort is being made to attract the interest of the executives of the different employers in such work and to impress upon them the great importance of checking up on their individual plants as to possible improved safeguards in connection with machinery and plant and of encouraging better safety practices and safety thinking in their superintendents, foremen, and workmen. It is only by combined effort of employers, superintendents, foremen, and workmen that best results can be obtained.

The employer's attention is being specially urged to the study of the cost of accidents in his own individual plant and to methods of reduction of same, just as in any other branch of his production cost. Special clerks are being employed by the Board at the expense of some of the accident prevention associations so that the experience of individual members of the associations can be furnished and studied by them. Any increase in cost can be promptly brought to their attention and the reason for same, whether due to payment of compensation to workmen or medical aid, accurately ascertained and the necessary steps taken to remove any contributing factors or excessive cost. One of the associations has already demonstrated during the present year splendid practical results by improving the financial standing of their class with the Board to a very considerable extent. As this intensive work is just beginning its full effect is not yet apparent. The Board is very anxious that all employers should give this highly important work their very heartiest support.

First Aid

The attention of employers is again drawn to the importance of prompt first aid treatment in all cases of accident in the plant, even where the accident appears to be trivial. Not only may the workman be spared a long period of disability from infection and all the pain and suffering and loss involved, but also the employers will be saved a great amount of accident cost if small accidents are promptly attended to and proper disinfectants applied. The provisions of the Act require every employer to have suitable first aid kits provided for use in the employment and industry carried on by him.

Rehabilitation

The Board has continued to provide courses of instruction in deserving cases and has somewhat increased the amount spent in rehabilitation during the past year, but the number of cases in which education by special courses can be given is extremely limited, being practically limited to the young and intelligent workman who is capable of receiving benefit from such courses, but with much the greater proportion of seriously injured workmen there is no other method of rehabilitation except by getting them back to some form of work which they are able to perform in their maimed condition. The Board has no means to secure re-employment and has to depend upon the employers themselves to carry out this work of rehabilitation of the workmen who cannot be given any other form of rehabilitation except by provision of suitable labouring work. Many employers willingly recognize their responsibility to re-establish their injured workmen in connection with their plants or industry wherever it is possible in such industry to provide the suitable work required. The Board urges every employer to co-operate with the Board and so recognize the responsibility of industry for its maimed and injured workmen.

Merit Rating

The Board has carried out the same principles in connection with merit rating for the present year and the amount awarded in merit rating shows a considerable increase, the amount awarded in 1928 in all classes in Schedule 1 being $85,597.27, whereas in 1929, $107,860.67 was awarded. This would apparently show better results in connection with the handling of accident costs.

Funds

In pursuance of the principle of having each year meet the total cost of all accidents happening in such year, the Board must make provision for meeting future payments in connection with all pensions awarded during the year and all payments which are deferred for one reason or another. The Board, therefore, sets aside each year the capitalized value of all pensions awarded and the total of all deferred awards. The basis of computation is the present worth of the pension on an earning of five per cent. half yearly according to the life expectancy tables for the life of the injured workman. For the purpose of meeting the pensions awarded and deferred payments, the Board has now invested in Schedule 1 the sum of $19,790,302.37, and in Schedule 2 the sum of $3,534,986.67, a total of $23,325,289.04.

One of the important duties of the Board is to see to the proper investment of these funds in safe securities and to secure if possible an earning of at least 5 per cent. upon these funds. Owing to the yields on bonds having steadily decreased since the high yield of the war period, there has been a decrease in earnings upon these reserve funds. While the earnings were 5.50 per cent. on the funds so invested in the year 1925, they have been reduced in the year 1929 to 5.04 per cent. The Board is hopeful with its investments for the present year that it will be able for a time longer to maintain an earning of over 5 per cent. as required by the tables.

No levy has been made this year for Disaster Reserve Fund, which was created by assessment on all the classes to cover any unforeseen disaster or to meet payments which would unduly burden any class of industry, being a recognition of collective liability of all employers in Schedule 1 for the cost of accidents occurring in industries under such Schedule. The standing of the Disaster Reserve at the present time shows a credit balance of $280,284.14.

The accident fund, which is the fund out of which accident costs are paid, is kept as nearly balanced as possible, the ideal situation being that only so much is levied and collected as is actually required for the accident cost of the year, and on the provisional figures for all years' operations to date it would appear that the Board has only collected a surplus of $429,421.73 in all classes, which figures may be lessened when the actual figures are ascertained.

Audit

A continuous audit of all the accounts of the Board has been carried on by Messrs. Fred Page Higgins & Company, the auditors appointed by the Lieutenant-Governor in Council under the provisions of section 74 of the Act, and their certificate is appended at the end of this report.

Contents of Report

In the different chapters and tables, as indicated in their headings, will be found information and particulars regarding compensation and assessments in the various industries, and explanations and particulars of the different funds of the Board; also an analysis and tabulation of the causes of accidents, the nature of injuries, and other information concerning accidents and workmen. The appendix contains a short summary of the operations from the commencement of the Act to the end of 1929.

CHAPTER I

SCHEDULE 1 INDUSTRIES FOR 1929

As some of the industries covered by the Act are under the collective liability system (the employer not being individually liable for accidents to his workmen but being assessed to provide a general fund out of which accidents occurring in his class of industry throughout the Province are taken care of) and others are under the individual liability system (the employer being liable to pay for accidents happening to his own workmen) separate financial statements have to be made for each. The industries under the collective liability system are included in Schedule 1, and those under individual liability in Schedule 2, the former comprising much the greater number.

This chapter deals with Schedule 1 industries for 1929. Schedule 2 industries are dealt with in Chapter II, while Chapter III deals with the work handled in both schedules and the administration of the Act generally during the year, Chapter IV with the different funds in both schedules and their standing at the end of 1929, and Chapter V gives financial and statistical information for 1928 which was not available when the report for that year was made.

Provisional Financial Statement

The provisional financial statement for the industries in Schedule 1 for 1929 is contained in Table 1. To show the standing for the year, estimates have to be made of adjustments of assessments according to actual payrolls and on the retroactive rates (the assessments for the year being first levied on an estimate of payroll and at a provisional rate), and estimates also have to be made of compensation and medical aid still to be awarded for accidents happening during the year which have not yet been finally disposed of by reason of the injured workman being still under medical treatment or reports not being received. Final figures for the year 1929 will be shown in the next subsequent report in the same manner as the final figures for 1928 are shown in Table 15 of this report.

The difference is to be noted between the amount of compensation and medical aid awarded for the year's accidents and the amount awarded during the year. The latter is partly for the prior year's accidents, while upon the other hand it does not cover all the liability for the current year's accidents. The more correct system of charging each year as far as possible with its own accidents, and for that purpose keeping the year's accounts open till the end of the subsequent year, has been adopted, rather than the looser method of taking the amount awarded during the year as the cost of the year's accidents and leaving always an outstanding liability unprovided for. For the purpose of information and comparison, however, the amounts awarded during the year are shown in Chapter III.

Accounts for Each Class

The industries in Schedule 1 are divided into classes, and as each class (subject to any transfer that may be made to it from the Disaster Reserve in any case of undue burden) bears its own accident cost—the employers in the class being in effect a mutual insurance association—separate accounts have to be kept for the different classes. Each class is credited with its own assessments, its share of interest and other income, and with any transfer made to it from Disaster Reserve, or credit from any other source, and is charged with the cost of its own accidents, its share of administration expenses, the cost of its safety association if it has one, and with its share of any amount set aside for Disaster Reserve.

The figures for each class, and the provisional surplus or deficit for the year, and the balance forward from prior years, and the provisional surplus or deficit for all years, are shown in Table 1. The final figures for each class and also the figures for the different groups within the classes (as in Table 15) will be shown in the next report. The assessments are fixed according to the accident cost and other expenses and charges in each class and group and having regard to the other income and credits.

The classes are numbered and the nature of the industries in each is shown at the bottom of Table 1, and full enumeration of the industries will be found in Schedule 1 of the Act and in the Board's rate book, the latter also showing the grouping within the class.

Assessments and Other Credits

The total assessments in all the classes of Schedule 1 for the year 1929, including estimated adjustments, amounted to $7,321,781.75. In assessments are included collections for default in making returns or payments and interest for under and over estimate of payroll. The other income and credits for the year consisted of interest received other than credited to the Pension Fund, Disaster Reserve, Silicosis Fund, and Compensation Deferred, as shown in Chapter IV; reimbursement for veteran cases, received from the Department of Pensions and National Health; cost of accidents collected under section 105 for failure to furnish payroll prior to accident; recovery from third parties under section 8; collections under section 112 (3) from employers for failure to furnish particulars of accidents; and assessments under section 83 (4) for extraordinary accident experience. Other income and credits amounted to $249,788.71, making a total of $7,571,570.46, of which $107,860.67 is to be refunded for merit rating. The net income and credits for the year are, therefore, $7,463,709.79.

Compensation and Other Charges

The compensation for Schedule 1 industries for the year, including estimate for what is still to be awarded for accidents happening during the year, amounted to $6,205,732.50; the medical aid, including estimate for what is outstanding, amounted to $1,480,626.98; the administration expenses for Schedule 1, including $5,267.07 for mine rescue work, amounted to $299,169.71; and $127,638.98 was paid to employers' safety associations. The total expenditures and charges for the year were $8,113,168.17.

The provisional deficit for the year was $649,458.38. The balance forward from prior years was a surplus of $1,078,880.11, which, added to the deficit for the year, makes a net provisional surplus of $429,421.73 at December 31, 1929.

Financial statement for Schedule 1 industries since the commencement of the Act is contained in the Appendix.

Number of Employers

The total number of employers listed in Schedule 1 at the end of 1929 was 24,078, as compared with 23,685 at the end of 1928. The number in each class and group of industry is shown in Table 2.

Wage Expenditure

The estimated total wage expenditure in Schedule 1 industries for the year 1929, calculated on provisional figures, is $543,455,000, as compared with $503,392,000 in 1928. The amounts for the different classes of industry are shown in Table 3.

The Board has no similar data for Schedule 2 and Crown industries as in these the employers pay for the accidents to their own workmen and are not required to make payroll returns or pay assessments upon them as in Schedule 1. The payroll would probably be about one-third that of Schedule 1.

Average Rates of Assessment

Assessments in Schedule 1 are in the form of a percentage of payroll and the average rate or percentage over all the classes actually paid by the employers can be ascertained by relating the total assessments to the total wage expenditure. This, on the provisional figures, gives an average rate of assessment for 1929 of $1.35 on every $100 of payroll. The average over all years since the commencement of the Act was $1.16.

Class	Co Pr As
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TABLE 1

PROVISIONAL FINANCIAL STATEMENT FOR SCHEDULE 1, BY CLASSES, FOR 1929

Class	INCOME AND CREDITS (Actual and Estimated)					EXPENDITURE AND CHARGES (Actual and Estimated)									SURPLUS OR DEFICIT FOR YEAR (Provisional)	Balance Forward Prior Years	SURPLUS OR DEFICIT ALL YEARS (Provisional)	Class
	Collected on Provisional Assessments	Estimated Adjustments of Assessments*	Interest Secs. 8, 83(4), 105, 112(3), Etc.†	Assessment Refunds on account of Merit Rating	TOTAL FOR YEAR	Compensation Paid, other than Pensions‡	Transferred for Pensions Awarded	Compensation Awarded, Payment Deferred	Compensation Estimated Outstanding	Medical Aid Paid	Medical Aid Estimated Outstanding	Administration Expenses and Mine Rescue Work	Paid to Safety Associations	TOTAL FOR YEAR				
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
1	634,894 26	156,500 00	2,160 40	17,275 49	776,279 17	213,860 64	82,965 00	915 00	234,760 36	100,873 11	35,207 30	33,422 31	21,233 33	723,237 05	53,042 12	—240,383 62	—187,341 50	1
2	289,924 82	—29,682 57	11,281 80	9,958 28	261,565 77	86,735 21	25,416 88	400 00	87,605 53	42,855 25	17,816 35	10,111 48	12,200 00	283,140 70	—21,574 93	51,801 59	30,226 66	2
3	103,780 41	20,300 74	507 11	477 96	124,110 30	40,817 94	36,947 00	1,760 00	26,681 64	16,737 69	10,391 24	4,702 42	3,232 85	141,270 78	—17,160 48	—15,936 63	—33,097 11	3
4	191,115 56	29,230 75	3,327 02	2,040 82	221,632 51	73,022 15	30,205 00	3,540 00	64,582 35	26,364 59	16,222 99	8,038 75	5,526 51	227,502 34	—5,869 83	2,284 10	—3,585 73	4
5	726,221 11	51,187 95	99,350 45	13,665 87	863,093 64	203,875 33	167,180 07	500 00	444,990 68	64,819 98	111,377 02	**39,334.55	....	1,032,077 63	—168,983 99	414,153 01	245,169 02	5
6	232,677 24	44,806 49	13,840 53	7,051 72	284,272 54	58,055 57	49,914 00	910 00	177,475 54	25,859 01	24,884 42	10,828 20	7,444 21	355,370 95	—71,098 41	109,972 31	38,873 90	6
7	125,966 12	23,294 53	10,204 02	1,968 18	157,496 49	40,808 76	48,485 00	500 00	37,439 19	15,595 21	7,983 53	5,131 75	3,528 00	159,471 44	—1,974 95	136,290 71	134,315 76	7
8	174,217 41	—4,911 71	3,921 34	2,226 00	171,001 04	72,044 84	16,699 00	835 00	36,362 77	33,002 21	9,090 70	7,865 80	5,407 60	181,307 92	—10,306 88	15,897 94	5,591 06	8
9	285,443 26	219,878 73	1,941 12	5,570 96	501,692 15	129,353 36	99,688 00	1,840 00	187,839 25	61,948 41	42,731 16	13,673 60	9,400 37	546,474 15	—44,782 00	52,882 14	8,100 14	9
10	276,139 20	51,671 68	8,895 60	2,176 44	337,530 04	137,926 22	66,802 00	5,675 00	78,768 60	59,427 44	20,941 70	10,311 20	7,088 77	386,940 93	—49,410 89	124,802 75	75,391 86	10
11	382,252 48	85,286 44	3,322 83	7,189 88	463,671 87	163,005 21	69,639 00	1,620 00	119,293 57	67,339 02	20,737 86	19,692 03	13,537 95	474,864 64	—11,192 77	—17,786 16	—28,978 93	11
12	166,315 60	12,381 52	9,121 90	3,241 96	184,577 06	52,105 76	19,719 00	100 00	66,810 32	24,470 94	13,552 20	7,586 43	5,215 55	189,560 20	—4,983 14	73,028 64	68,045 50	12
13	89,538 30	—38,421 10	683 94	758 46	51,042 68	24,465 05	16,546 00	....	54,154 75	9,809 65	13,981 81	4,117 90	....	123,075 16	—72,032 48	—30,293 99	—102,326 47	13
14	59,059 70	5,002 89	1,033 20	40 80	65,054 99	15,467 66	9,503 00	....	15,424 62	10,611 59	3,856 16	2,713 95	1,865 80	59,442 78	5,612 21	—4,822 03	790 18	14
15	246,028 90	3,138 83	10,179 78	1,288 02	258,059 49	94,640 47	57,025 00	910 00	82,268 25	44,960 73	17,935 44	10,388 67	7,142 05	315,270 61	—57,211 12	46,032 43	—11,178 69	15
16	186,024 24	10,600 00	7,557 80	3,571 60	200,610 44	56,336 82	40,005 00	1,070 00	45,095 82	20,812 42	15,802 69	7,705 30	5,297 27	192,125 32	8,485 12	44,008 07	52,493 19	16
17	117,491 39	—10,753 61	7,743 89	1,612 02	112,869 65	33,822 35	10,764 00	1,980 00	51,599 10	16,032 13	8,009 24	5,389 30	3,705 06	131,301 18	—18,431 53	60,486 35	42,054 82	17
18	75,105 86	1,215 29	2,416 34	485 88	78,251 61	25,984 76	21,326 00	....	23,541 84	13,205 85	4,507 30	3,335 67	2,293 22	94,194 64	—15,943 03	22,916 22	6,973 19	18
19	65,725 74	14,624 54	3,309 02	82.08	83,577 22	31,830 56	12,705 00	505 00	34,498 55	15,081 10	6,863 94	1,764 50	1,213 09	104,461 74	—20,884 52	43,341 61	22,457 09	19
20	200,953 67	89,300 00	3,529 12	297 12	293,485 67	80,001 76	44,138 00	6,000 00	136,425 19	39,343 75	27,297 87	9,103 80	....	342,310 37	—48,824 70	—99 23	—48,923 93	20
21	276,632 39	118,155 38	5,023 03	4,938 78	394,872 02	109,029 25	77,463 00	....	120,916 06	42,585 61	34,252 08	15,267 20	....	399,513 20	—4,641 18	12,935 11	8,293 93	21
22	113,961 46	1,937 07	2,173 05	1,669 33	116,402 25	22,604 48	23,418 00	....	25,176 20	6,702 97	5,035 24	5,962 00	7,000 00	95,898 89	20,503 36	—18,493 06	2,010 30	22
23	455,561 69	18,330 64	25,266 03	20,273 02	478,885 34	114,071 11	81,538 00	4,465 00	164,715 33	41,121 95	32,079 76	26,797 15	....	464,788 30	14,097 04	172,108 28	186,205 32	23
24	716,492 47	254,183 99	12,999 39	......	983,675 85	312,259 70	154,922 00	730 00	399,914 08	118,261 21	62,247 16	35,925 75	5,307 35	1,089,567 25	—105,891 40	23,753 57	—82,137 83	24
All	6,191,523 28	*1,130,258 47	†249,788 71	107,860 67	7,463,709 79	‡2,192,124 96	1,263,012 95	34,255 00	2,716,339 59	917,821 82	562,805 16	299,169 71	127,638 98	8,113,168 17	—649,458 38	1,078,880 11	429,421 73	All

*Adjusted on actual pay rolls and retroactive rates.

†Includes interest, $177,232.45; Sec. 8, $6,805.94; Sec. 83(4), $50,000; Sec. 105, $6,042.93; Sec. 112(3), $513.37; reimbursement from D. P. & N. H., $9,194.02.

‡Includes Rehabilitation, $748.17.

**Includes Mine Rescue Work, $5,267.07.

Class Numbers of Industries

1. Lumbering.
2. Pulp and paper mills.
3. Furniture manufacturing, etc.
4. Planing mills, etc.
5. Mining and explosives.
6. Brick manufacturing, quarrying and glass works.
7. Rolling mills, etc.
8. Foundries, etc.
9. Fabrication structural steel, etc.
10. Metal articles, jewellery manufacturing, etc.
11. Agricultural implements, etc.
12. Gas, petroleum, paint, drugs, soap, etc.
13. Milling.
14. Abattoirs, etc.
15. Bakeries, canning, liquors and tobacco.
16. Tanneries, leather and rubber goods.
17. Textiles.
18. Clothing, power laundries, etc.
19. Printing and stationery.
20. Teaming, cartage, coal and wood yards, etc.
21. Road construction, etc.
22. Electric power, etc.
23. Steel construction, railway and canal construction, dredging, fishing, etc.
24. Building.

TABLE 2

NUMBER OF FIRMS IN SCHEDULE 1, BY CLASSES AND GROUPS, DECEMBER 31, 1929

Class	Group 0	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8	Group 9	TOTALS
1	183	142	1,152								1,477
2	35	24	59								118
3	140	34	32	120							326
4	379	55	75	23	122						654
5	38	139	8	160	0	11	22	10			388
6	84	116	7	172	66	141	140				726
7	6	9									15
8	95	8	56	43							202
9	20	13	1	14	180	22					250
10	284	282	36	49	49	27	181	120			1,028
11	53	863	73	2							991
12	65	246	101	22	237						671
13	573	128									701
14	140										140
15	304	261	74	284	71	391	38				1,423
16	63	103	82	34	39						321
17	128	132	59								319
18	983	170									1,153
19	316	543	48	55							962
20	1,358	1,017									2,375
21	459	210									669
22	442										442
23	103	110	387								600
24	1,008	419	1,281	432	1,202	1,125	357	153	1,794	356	8,127
	All										24,078

TABLE 3

ESTIMATE OF WAGE EXPENDITURE, SCHEDULE 1, BY CLASSES, FOR 1929

Class	Wage Expenditure
1	$17,313,000
2	19,023,000
3	14,425,000
4	13,232,000
5	29,582,000
6	13,279,000
7	12,139,000
8	16,107,000
9	28,551,000
10	44,100,000
11	53,426,000
12	23,920,000
13	6,906,000
14	7,459,000
15	38,588,000
16	26,117,000
17	25,956,000
18	30,643,000
19	28,786,000
20	12,837,000
21	13,049,000
22	5,627,000
23	9,556,000
24	52,834,000
TOTAL	$543,455,000

CHAPTER II

SCHEDULE 2 INDUSTRIES DURING 1929

Table 4 is a statement of compensation awarded and the moneys handled during 1929 in Schedule 2 industries (in which the employer is individually liable for accidents to his workmen). Dominion Crown cases under the Act by Dominion legislation, and Provincial Crown cases referred to the Board for adjustment, are included.

The total amount of compensation awarded in Schedule 2 industries and Crown cases during 1929 was $1,280,011.97. Of this amount $170,742.09 was for workmen of municipal corporations, $344,056.21 for steam railroads, $32,798.91 for electric railways, $79.171.36 for navigation companies, $18,016.46 for express and sleeping car companies, $10,578.29 for telephone and telegraph companies, $529,209.01 for Dominion Crown cases, and $95,131.96 for Provincial Crown cases. Of the total amount awarded $683,880.98 was for pensions in pension cases, and $596,130.99 for cases not pension cases and for compensation not pensions in pension cases.

In pension cases, except in the case of municipal or government bodies or departments thereof, not so desiring, deposits must be made by employers in Schedule 2 industries. Particulars of these are given under "Deposits under Section 28." Under "Claimants' Moneys" are included moneys held by the Board under awards in which in the interest of the claimant, or for some other reason, payment of the amounts held is deferred to a later date, as in the case of minors. "Deposits under Section 32" are amounts deposited with the Board to enable the Board to make prompt payments without waiting for receipt of cheque from employer.

Employers in Schedule 2 are assessed their share of the expense of administration as set out in Table 8. For 1929 that share amounted to $24,142.43, as compared with $23,816.76 in 1928, and $22,307.13 in 1927. Proportionate to the amount of compensation awarded, administration expenses in Schedule 2 and Crown cases were 3.68 per cent., as compared with 3.33 per cent. in 1928, and 4.04 per cent. in 1927.

Further information as to Schedule 2 funds, and particulars of Schedule 2 investments are given in Chapter IV and in Tables 9 and 14, and in the Appendix.

TABLE 4

STATEMENT FOR SCHEDULE 2 DURING 1929

SCHEDULE 2 AWARDS

	Awards Not Pensions	Pensions	TOTALS
Municipal Corporations, etc.	$83,288 09	$87,454 00	$170,742 09
Steam Railroads	143,950 09	200,106 12	344,056 21
Electric Railways	26,317 91	6,481 00	32,798 91
Navigation Companies	36,019 36	43,152 00	79,171 36
Express and Sleeping Car Companies	7,363 46	10,653 00	18,016 46
Telephone and Telegraph Companies	10,372 24	206 05	10,578 29
All Others	307 68	....	307 68
Dominion Crown Cases	245,674 20	283,534 81	529,209 01
Provincial Crown Cases	42,837 96	52,294 00	95,131 96
TOTALS	$596,130 99	$683,880 98	$1,280,011 97

SCHEDULE 2 FUNDS

Deposits under Section 28

Cash in bank and invested, January 1, 1929	$3,435,829 55	
Deposits received from employers	259,725 08	
Interest received	189,381 01	
Paid to pensioners		$325,386 88
Deposits returned to employers		22,092 86
Cash in bank and invested, December 31, 1929		3,537,455 90
	$3,884,935 64	$3,884,935 64

Claimants' Moneys

Cash in bank and invested, January 1, 1929	$33,504 17	
Deposits received from employers	1,665 00	
Interest received	1,626 55	
Paid to claimants—as principal		$5,324 50
Cash in bank and invested, December 31, 1929		31,471 22
	$36,795 72	$36,795 72

Deposits under Section 32

Cash in bank and invested, January 1, 1929	$40,676 81	
Deposits received from employers	806,114 99	
Payments made—Compensation and Medical Aid		$795,779 57
—Rehabilitation		685 75
Deposits returned to employers		2,929 62
Cash in bank, December 31, 1929		47,396 86
	$846,791 80	$846,791 80

TOTALS OF FUNDS

Cash in bank and invested, January 1, 1929	$3,510,010 53	
Deposits received from employers	1,067,505 07	
Interest received	191,007 56	
Payments made		$1,127,176 70
Deposits returned to employers		25,022 48
Cash in bank and invested, December 31, 1929		3,616,323 98
	$4,768,523 16	$4,768,523 16

CHAPTER III

WORK HANDLED DURING 1929

This chapter deals with the work handled during 1929 and with the administration of the Act generally during the year. Particulars are given in Tables 5 to 8.

The figures are for what has been dealt with during 1929 without regard to the year in which the accidents dealt with occurred, while as explained in Chapter I the figures in Chapter I and Chapter V are for the accidents happening during the year.

Benefits Awarded during the Year

The total amount of compensation awarded during 1929 was $6,626,633.16, of which $5,346,621.19 was in Schedule 1 industries, $655,671.00 in Schedule 2 industries, and $624,340.97 in Crown cases; there was also paid for medical aid in Schedule 1 during the year $1,385,524.62, making the total benefits awarded during the year $8,012,157.78. In Schedule 2 and Crown cases medical aid is provided directly by the employer and no figures are available.

The benefits awarded during each year and the total since the commencement of the Act are as follows:

	Schedule 1		Schedule 2 and Crown Compensation	Total Benefits
Year	Compensation	Medical Aid		
1929	$5,346,621 19	$1,385,524 62	$1,280,011 97	$8,012,157 78
1928	4,565,688 56	1,166,507 54	1,335,750 83	7,067,946 93
1927	3,930,417 59	1,062,859 64	1,091,377 64	6,084,654 87
1926	3,664,039 94	988,486 70	1.168,825 26	5,821,351 90
1925	3,635,530 27	875,836 01	1,054,077 11	5,565,443 39
1924	4,052,287 77	835,956 60	1,234,575 97	6,122,820 34
1923	4,036,170 26	788,905 90	1,348,785 58	6,173,861 74
1922	3,417,101 61	692,819 94	1,582,975 06	5,692,896 61
1921	3,858,017 50	662,793 89	1,668,452 10	6,189,263 49
1920	5,113,149 77	703,705 66	1,963,389 82	7,780,245 25
1919	2,808,638 65	386,298 51	997,922 77	4,192,859 93
1918	2,751,137 45	369,346 37	763,511 02	3,883,994 84
1917	2,286,954 99	*83,514 07	623,556 37	2,994,025 43
1916	1,553,653 38	†.........	451,709 93	2,005,363 31
1915	692,389 09	†.........	200,932 03	893,321 12
Totals	$51,711,798 02	$10,002,555 45	$16,765,853 46	$78,480,206 93

*Half year only. †No provision for medical aid.

The increase in benefits from the early years is largely by reason of increase in wages, compensation being for the most part a percentage of wages, and additional industries have been covered, and some material changes were made in compensation. The large total for 1920 is by reason of the retroactive increase in widows' and children's pensions, and the small amount awarded during 1915 is by reason of many 1915 accidents not being, nor capable of being, finally disposed of till the following year. The amount of benefits awarded for each year's accidents as distinguished from the amount awarded during the year is shown in Chapter V.

Accidents Reported during the Year

During 1929, 87,103 accidents were reported. These included some not serious enough to involve payment of either compensation or medical aid and for which no claim was made and others for which claims were made but which were not allowed by the Board.

At the close of the year there were 1,988 claims in assembly, as compared with 2,124 at the end of 1928, notice of the accident having been given but reports necessary to deal with the case not yet having been received.

The number of accidents reported each year and the total number since the commencement of the Act are as follows:

Year	Schedule 1	Schedule 2	Crown	Totals
1929	76,029	6,008	5,066	87,103
1928	69,011	5,815	4,572	79,398
1927	62,063	5,412	4,504	71,979
1926	57,032	4,942	3,942	65,916
1925	50,883	5,079	4,050	60,012
1924	49,558	4,916	4,201	58,675
1923	51,655	6,080	3,374	61,109
1922	42,139	7,124	1,148	50,411
1921	36,272	7,666	1,253	45,191
1920	46,177	7,222	1,452	54,851
1919	36,236	7,918	106	44,260
1918	40,662	7,113	73	47,848
1917	30,701	5,813	18	36,532
1916	21,269	4,806	17	26,092
1915	13,878	3,144	11	17,033
Totals	683,565	89,058	33,787	806,410

Accidents Paid For during the Year

Table 5 shows the number of accidents in which compensation or medical aid was paid during the year. The total number was 73,815, as compared with 66,532 during 1928. The 73,815 comprised 452 deaths, 15 permanent total disability cases, 3,235 permanent partial disability cases, 36,158 temporary disability cases, and 33,955 cases in which medical aid only was paid. Schedule 2 and Crown cases involving medical aid only, which are a large proportion of the accidents reported, are not included as accidents paid for as the medical aid is furnished directly by the employer.

The number of accidents in which compensation or medical aid was awarded each year since the commencement of the Act is as follows:

Year	Schedule 1	Schedule 2	Crown	Totals
1929	68,195	2,883	2,737	73,815
1928	61,384	2,723	2,425	66,532
1927	55,894	2,741	2,443	61,078
1926	52,199	2,489	2,182	56,870
1925	47,782	2,734	2,217	52,733
1924	46,616	2,820	2,475	51,911
1923	47,873	3,849	1,916	53,638
1922	37,172	4,572	765	42,509
1921	34,271	5,161	834	40,266
1920	42,693	4,444	714	47,851
1919	34,400	4,517	153	39,070
1918	36,565	4,335	30	40,930
*1917	25,277	3,406	19	28,702
*1916	15,370	2,825	3	18,208
*1915	8,328	1,494	7	9,829

*Cases involving medical aid only not covered till July 1, 1917.

Awards Changed

In addition to claims compensated, as shown in Table 5, the Board in 1929 reopened for further award 276 claims which had been settled previously.

Cheques, Assessments, Mail and Callers

In all 275,009 cheques were issued during the year, an average of about 917 daily, and there were 32,275 assessments made, including refunds. About 5,000 pieces of mail were handled daily, and the average number of office callers was ninety-three a day.

Receipts and Payments

The receipts and payments during the year are shown in Table 6, the statement for Schedule 2 including Crown cases. Explanation of the items and the funds referred to will be found in other parts of the report. A summary of receipts and payments since the commencement of the Act is given in the Appendix.

Payments to Safety Associations

The safety or accident prevention associations are organizations of employers established under the authority of the Act by the employers in nineteen out of the twenty-four classes of industry. They are under the management of the employers, but the expenses are paid by the Board out of the accident fund.

The total amounts so paid are set out in Table 7, which table also shows the amount paid out on account of mine rescue work in Class 5.

Administration Expenses

The administration expenses of the Board, analyzed under the different headings, are shown in Table 8. The total administration expenses during 1929 were $341,083.58, as compared with $317,247.35 during 1928. The employers pay the whole expense of the administration of the Act. The amount is divided, according to the accidents handled, among Schedule 1, Schedule 2, and Dominion and Provincial Crown. The amount charged to Schedule 1 employers for the year was $293,902.64, to Schedule 2, $24,142.43, to Dominion Crown, $19,360.97, and to Provincial Crown, $3,677.54.

The cost of office furniture, fixtures, and equipment, including permanent equipment, has always been charged to administration expenses in the year in which payment therefor was made, and no entry for which has ever been made in the standing of the funds. The value of this furniture and equipment at the present time is estimated at about $25,000.

The total administration expenses for 1929 were 4.26 per cent. of the benefits awarded. The administration expenses in Schedule 1 for 1929 were 4.37 per cent. of the benefits awarded, those in Schedule 2 and Crown being 3.68 per cent.

TABLE 5

COMPENSATION, MEDICAL AID AND ACCIDENTS PAID FOR DURING 1929

Compensation Awarded during 1929

Schedule 1	$5,346,621 19
Schedule 2	655,671 00
Crown Cases	624,340 97
Total	$6,626,633 16

Medical Aid Paid during 1929

Schedule 1	$1,385,524 62
Schedule 2	furnished by employer
Crown Cases	furnished by employer

Accidents Paid For during 1929

	Medical Aid only	Temp. Dis.	Perm. Partial Dis.	Perm. Total Dis.	Death	TOTALS
SCHEDULE 1—						
Full Compensation	......	28,277	2,884	10	321	31,492
Part Compensation	......	2,728	......	......	20	2,748
Medical Aid only	33,955	......	......	......	......	33,955
Totals	33,955	31,005	2,884	10	341	68,195
SCHEDULE 2—						
Full Compensation	......	2,390	177	3	58	2,628
Part Compensation	......	253	......	......	2	255
Totals	......	2,643	177	3	60	2,883
CROWN CASES—						
Full Compensation	......	2,311	174	2	48	2,535
Part Compensation	......	199	......	......	3	202
Totals	......	2,510	174	2	51	2,737
GRAND TOTALS	33,955	36,158	3,235	15	452	73,815

TABLE 6

STATEMENT OF RECEIPTS AND PAYMENTS DURING 1929

Schedule 1

Receipts		
Cash in Banks, Jan. 1, 1929:		
Can. Bank of Commerce...	$3,315 25	
Royal Bank...	2,165 81	
		$5,481 06
Net Assessments, Penalties, etc., collected:		
Gross Assessments......	$7,739,528 44	
Merit Rating Charges.....	9 03	
Under Sec. 8...	7,858 12	
Under Sec. 83(4)	50,000 00	
Under Sec. 105.	6,042 93	
Under Sec. 112(3)	513 37	
From D.P. & N.H........	9,194 02	
	$7,813,145 91	
Less:		
Assessments and Penalties refunded....	$68,284 57	
Merit Rating Refunds....	82,672 51	
	$150,957 08	
		$7,662,188 83
Interest.....................		1,028,002 10
From Schedule 2 employers and Dominion Crown for administration expenses account of prior years paid out of Schedule 1 in 1928.............		44,475 87
Principal returned from investments........	865,600 56	
Decrease in value investments by amortization of premiums.....	39,053 32	
		904,653 88
Silicosis.....................		685 85
From Dominion Bank—overdraft....................		260,903 18
		$9,906,390 77

Payments		
Overdraft—Dominion Bank...		$135,834 86
Compensation paid other than Pensions and Compensation Deferred..................		3,146,779 54
Pensions Paid................		1,548,450 68
Deferred Compensation paid..		51,059 24
Rehabilitation paid...........		4,835 47
Medical Aid paid............		1,380,633 92
Silicosis paid................		89,983 17
Paid under Sec. 8............		1,052 18
Mine Rescue Work paid......		5,267 07
Administration Expenses......		341,083 58
Paid to Safety Associations....		127,638 98
Invested........	$3,047,784 69	
Increase in value of investments by accumulation of discounts........	24,946 48	
		3,072,731 17
Cash in Banks, Dec. 31, 1929:		
Can. Bank of Commerce.....	$325 78	
Royal Bank...	715 13	
		1,040 91
		$9,906,390 77

TABLE 6—Continued

Schedule 2

Receipts		
Cash in Imperial Bank, Jan. 1, 1929		$76,358 58
From Employers for Deposits under Sec. 28		259,725 08
From Employers for Claimants' Moneys		1,665 00
From Employers for Deposits under Sec. 32		806,114 99
Interest		191,007 56
Principal returned from investments	0 00	
Decrease in value of investments by amortization of premiums	917 92	
		917 92
		$1,335,789 13

Payments		
To Claimants out of Deposits under Sec. 28		$325,386 88
Deposits returned to Employers under Sec. 28		22,092 86
To Claimants out of Claimants' Moneys:		
Principal	$5,324 50	
Interest	....	
		5,324 50
Paid out of Deposits under Sec. 32:		
For Compensation	$768,066 14	
For Medical Aid	27,713 43	
		795,779 57
Deposits returned to Employers under Sec. 32		2,929 62
Rehabilitation paid		685 75
Invested	$96,261 62	
Increase in value of investments by accumulation of discounts	5,991 02	
		102,252 64
Cash in Imperial Bank, Dec. 31, 1929		81,337 31
		$1,335,789 13

TABLE 7

PAYMENTS TO SAFETY OR ACCIDENT PREVENTION ASSOCIATIONS, 1929

Association	Class	Total Payments	
Lumbermen's Safety Association	1	$21,233 33	
Ontario Pulp and Paper Makers' Safety Association	2	12,200 00	
Industrial Accident Prevention Associations	3, 4, 6, 7, 8, 9, 10, 11, 12, 14, 15, 16, 17, 18, 19, 24	87,205 65	
Electrical Employers' Association of Ontario	22	7,000 00	
TOTAL			$127,638 98

PAYMENTS FOR MINE RESCUE WORK (CLASS 5), 1929

Erection of Timmins Station, Salary of Operator, and Supplies	$5,267 07

TABLE 8

ANALYSIS OF ADMINISTRATION EXPENSES DURING 1929

Salaries of Board and Staff	$245,463 86	
Travelling Expenses of Board and Staff	13,179 38	
Printing, Stationery, and Office Supplies	20,646 08	
Postage and Excise Stamps	22,898 15	
Telephone, Telegraph, and Express	1,082 76	
Legal Expenses, Witness Fees, etc	1,565 21	
Medical Examinations, X-Ray Supplies, etc	634 74	
Workmen's Travelling Expenses	124 52	
Insurance and Security Service	4,291 06	
Auditors' Services, under instructions of Attorney-General	2,500 00	
Rent of Premises, Electric Current, and Miscellaneous Services	23,938 86	
Permanent Equipment	4,745 92	
Sundry Expenses	13 04	
Total Administration Expenses, 1929		$341,083 58
Chargeable to Dominion of Canada	$19,360 97	
Chargeable to Province of Ontario	3,677 54	
Chargeable to Schedule 2 Employers	24,142 43	
Chargeable to Schedule 1 Employers	293,902 64	
		$341,083 58

CHAPTER IV

CONDITION OF FUNDS

A general statement of the condition of the funds in Schedule 1 and in Schedule 2 is contained in Table 9, and particulars of the various funds and of the Board's investments are given in Tables 10 to 14. A summary since the commencement of the Act will be found in the Appendix.

Schedule 1 Funds

The Schedule 1 funds are known and referred to in the Act as the "Accident Fund." They comprise, in addition to current funds out of which temporary payments of compensation, medical aid, and administration expenses are paid, the Pension Fund, Disaster Reserve, and Compensation Deferred. The standing of the Accident Fund, showing assets and liabilities, at December 31, 1929, is shown in Table 9. The balance of assets in excess of liabilities at that date was $953,613.26, being $280,284.14 Disaster Reserve, $243,907.39 accrued interest on investments, and $429,421.73 standing at the credit of the classes December 31, 1929. This is exclusive of office furniture and equipment mentioned in Chapter III.

Pension Fund

The Pension Fund, representing the outstanding pension liability, comprises the largest part of the funds standing to the credit of Schedule 1. The purpose of the Pension Fund is to take care of future payments of pensions which have already been awarded. Actuarial tables (published as an appendix to the report for 1922), embodying the contingencies of death and remarriage, have been compiled to show for each age and kind of pension the average amount (sometimes referred to as capitalized value) necessary to complete pension payments. When a pension is awarded this average amount is transferred from current funds to the Pension Fund. All payments of pensions are made from the Pension Fund. Since the amount transferred in any one instance is the average amount required, no retransfer is made should a residue be left at the expiry of the pension, nor is any additional transfer made should the amount be exhausted before expiry of the pension.

Re-transfer from Pension Fund

During the years 1923 and 1924 an actuarial survey of the Board's pension experience and revaluation of the pension liability was made, all existing pensions being revalued. As a result the Pension Fund was found to be a little in excess of what the experience indicated to be necessary. As at date of January 1, 1924, a retransfer of $600,000 was accordingly made from the Pension Fund to current funds, being distributed among the different classes of industry in proportion to the amount of Pension Fund to the credit of each class.

As of date October 31, 1925, actuarial revaluation of all outstanding pension fund obligations was made, the Board's actuarial tables being used. To the liability for each class thus ascertained was added a surcharge of 2 per cent. to allow for possible divergence of actual from expected mortality. Deduction was made of the surcharged liability in total for all the classes from the balance in the Pension Fund and the difference was retransferred to the current funds, proportional to each class according to the balance in the Pension Fund. The sum transferred amounted to $427,214.62.

Further revaluation was made as of dates October 31, 1926; October 31, 1927; October 31, 1928, and October 31, 1929. On October 31, 1929, the Pension Fund showed a balance of $17,125,640.06, with liabilities of $16,902,147.89, an excess of funds over liabilities of $223,492.17.

Particulars of Pension Fund

Table 10 gives particulars of the Pension Fund for each class. The balance in the fund at the commencement of 1929 was $15,970,852.31; $2,107,161.31 was transferred during the year for pension awards; $822,666.77 interest (at the rate of five per cent. per annum, compounded half-yearly, which is the basis used in computing capitalized values of pensions) was added; and $1,548,450.68 was paid for pensions. The balance in the fund at the end of the year was $17,352,229.71.

The transfers for pension awards during the year included $16,406.00 transferred from the Disaster Reserve to meet the extra cost of incurred disabilities superimposed upon previous disabilities, and $33,058.00 transferred from Silicosis Account to provide for pensions in cases of silicosis in Class 5.

Disaster Reserve

The Disaster Reserve is a fund set aside under the provisions of section 99 (2) of the Act to meet any unforeseen disaster or other circumstance which might unduly burden the employers in any class of industry. The fund has been accumulated by a transfer of one per cent. of the gross assessments up to the end of 1922, and for the year 1928. These are the only moneys set aside or held by the Board which do not directly cover liabilities actually incurred by reason of accidents which have already happened.

The standing of the Disaster Reserve is shown in Table 11. The balance at the end of 1929 was $280,284.14, $13,455.85 interest for the year, and $13,970.66 transferred from assessment receipts for 1928 received during 1929, being added to the balance of $269,263.63 in the fund at the beginning of the year, and $16,406.00 transferred to the Pension Fund.

Compensation Deferred

The funds included under "Compensation Deferred" comprise compensation moneys held at interest for claimants in Schedule 1, payment being deferred to a future time by reason of the claimant being a minor or for other reason. The condition of the fund is shown in Table 12. At the beginning of the year the amount on hand was $103,924.77; deferred awards during the year amounted to $56,867.50 and $5,408.48 interest was added during the year; the payments during the year amounted to $51,059.24, of which $45,786.90 was for principal and $5,272.34 for interest, leaving a balance of $115,141.51 at the end of the year.

Silicosis Account

Table 13 gives particulars of the Silicosis Account which was established to take care of special assessments and payments in Class 5 necessitated by the addition of "Silicosis" contracted in mining operations to the list of industrial diseases under the Act, by amendment effective April 8, 1926. The balance in the account at the beginning of 1929 was $256,913.77; $685.85 was collected by assessment, and $9,238.55 was added as interest; withdrawals were $123,041.17; of which $64,035.37 was for compensation, $4,890.70 for medical aid, $51,320.55 for salaries and expenses in connection with examination of underground mine workers, and $2,794.55 for salaries and expenses of Referee Board. The balance in the account December 31, 1929, was $143,797.00.

Investments

Particulars of the Board's investments are given in Table 14.

The total invested at the end of the year in Schedule 1 was $21,034,209.76, consisting of $18,622,225.08 value of investments at the beginning of the year, $3,072,731.17 invested during the year, $243,907.39 accrued interest (earned but not received), less $904,653.88 principal returned.

Particulars of each investment are shown in the list, including kind of investment, particular security, yield of interest, term, par value, book value, and accrued interest.

With the exception of short-date deposits of current funds intended for use before the current year's assessments are received, all investments consist of Province of Ontario bonds, municipal or municipally-guaranteed debentures, and Dominion of Canada guaranteed bonds.

The average rate of interest received on permanent investments in Schedule 1 during 1929 was approximately 5.04 per cent., as compared with 5.07 per cent. in 1928, and 5.19 per cent. received during 1927. Three per cent. is received on current bank balances.

Schedule 2 Funds

The funds handled by the Board in respect of Schedule 2 industries include employers' deposits for pensions required to be made with the Board under the provisions of Section 28 of the Act, temporary deposits or advances of money made by employers under Section 32 to facilitate prompt payment of claims, and claimants' moneys held by the Board in cases of awards payment of which by reason of the claimant being a minor or for other reason is deferred to a future time.

The standing of Schedule 2 funds at December 31, 1929, is shown in the latter part of Table 9, and the particulars and a list of Schedule 2 investments are given in Table 14.

At the end of 1929 the deposits held under Section 28 amounted to $3,537,455.90, deposits under Section 32 to $47,396.86, the amount of claimants' moneys held by the Board was $31,471.22, and the accrued interest, neither received nor apportioned, amounted to $34,957.06, making a total of $3,651,281.04, of which $3,534,986.67 was held in permanent investments, $81,337.31 was on deposit in the Imperial Bank, and $34,957.06 was interest accrued on investments but not yet payable.

The rate of interest on Schedule 2 funds during 1929 was 5.56 per cent., as compared with 5.908 per cent. during 1928, and 6.04 per cent. during 1927.

TABLE 9

STANDING SCHEDULE 1 ACCIDENT FUND AS AT DECEMBER 31, 1929

Assets		
Cash in Banks:		
Bank of Commerce	$325 78	
Royal Bank	715 13	
		$1,040 91
Short Date Deposits		1,000,000 00
Investments		19,790,302 37
Accrued Interest on Investments		243,907 39
Due from Schedule 2 employers for Administration Expenses paid out of Schedule 1 Funds		24,142 43
Due from Dominion of Canada for Administration Expenses paid out of Schedule 1 Funds		19,360 97
Due from Province of Ontario for Administration Expenses paid out of Schedule 1 Funds		3,677 54
Assessments estimated to be due on adjustment of 1929 Payrolls (see Table 1)	$1,130,258 47	
Less:		
Merit Rating Refunds to be made	107,860 67	
		1,022,397 80
		$22,104,829 41

Liabilities		
Overdraft—Dominion Bank		$260,903 18
Compensation Deferred, other than Pensions		115,141 51
Pension Liability		17,352,229 71
Compensation estimated outstanding		2,716,339 59
Medical Aid estimated outstanding		562,805 16
Balance of Silicosis Account at credit of employers		143,797 00
Assets in Excess of Liabilities:		
Disaster Reserve	$280,284 14	
Accrued Interest on Investments	243,907 39	
	$524,191 53	
Balance at Credit of Classes (Table 1)	429,421 73	
		953,613 26
		$22,104,829 41

STANDING SCHEDULE 2 FUNDS AS AT DECEMBER 31, 1929

Cash in Imperial Bank	$81,337 31
Investments	3,534,986 67
Accrued Interest	34,957 06
	$3,651,281 04

Balance Employers' Deposits under Section 28	$3,537,455 90
Balance Employers' Deposits under Section 32	47,396 86
Claimants' Moneys held by Board	31,471 22
Accrued Interest on Investments not received or apportioned	34,957 06
	$3,651,281 04

TABLE 10

PENSION FUND, SCHEDULE 1 BY CLASSES, DECEMBER 31, 1929

Class	Balance Forward from 1928	Pension Awards during 1929	Interest Received	Pension Payments	Balance as at Dec. 31, 1929	Class
	$ c.	$ c.	$ c.	$ c.	$ c.	
1	1,916,165 28	162,693 11	96,713 87	174,228 79	2,001,343 47	1
2	952,432 40	50,265 88	47,220 50	89,629 30	960,289 48	2
3	215,032 93	51,037 00	11,608 37	22,500 73	255,177 57	3
4	591,022 24	56,249 70	29,915 01	56,466 51	620,720 44	4
5	1,957,250 86	†277,425 72	101,247 78	192,015 03	2,143,909 33	5
6	661,865 14	80,352 20	33,853 87	66,645 61	709,425 60	6
7	531,288 42	68,246 39	27,304 32	52,134 19	574,704 94	7
8	355,312 78	23,652 27	17,760 41	32,632 07	364,093 39	8
9	736,686 13	137,383 54	38,915 76	73,343 06	839,642 37	9
10	901,330 73	85,849 00	45,699 34	83,104 20	949,774 87	10
11	704,918 31	139,182 00	37,536 81	66,082 69	815,554 43	11
12	539,314 25	27,095 60	26,628 61	53,729 73	539,308 73	12
13	382,684 27	24,877 00	19,108 99	35,322 55	391,347 71	13
14	162,024 42	26,757 00	8,468 23	16,258 17	180,991 48	14
15	599,316 39	112,430 00	31,607 47	62,372 45	680,981 41	15
16	377,398 96	79,850 17	20,281 94	33,386 40	444,144 67	16
17	376,912 85	30,212 00	18,979 70	34,222 30	391,882 25	17
18	72,896 50	28,243 00	4,223 97	7,163 00	98,200 47	18
19	217,426 98	19,650 00	11,056 89	17,688 61	230,445 26	19
20	332,162 49	55,935 79	17,380 07	33,640 45	371,837 90	20
21	588,245 19	*119,956 00	31,298 60	59,958 54	679,541 25	21
22	316,307 09	57,575 00	16,571 40	35,518 18	354,935 31	22
23	970,454 10	147,702 10	50,557 43	91,279 41	1,077,434 22	23
24	1,512,403 60	*244,540 84	78,727 43	159,128 71	1,676,543 16	24
	15,970,852 31	2,107,161 31	822,666 77	1,548,450 68	17,352,229 71	

*Transferred from Disaster Reserve:

Class 21..........	$9,370 00
Class 24..........	7,036 00

†Transferred from Silicosis Account:

Class 5..........	$33,058 00

TABLE 11

DISASTER RESERVE, DECEMBER 31, 1929

Disaster Reserve as at December 31, 1928..........		$269,263 63
Amount credited in 1929..........		13,970 66
Interest credited in 1929..........		13,455 85
		$296,690 14
Withdrawn account Class 21..........	$9,370 00	
" " " 24..........	7,036 00	
		16,406 00
Amount as at December 31, 1929..........		$280,284 14

TABLE 12

COMPENSATION DEFERRED, DECEMBER 31, 1929

Balance in fund, December 31, 1928		$103,924 77
Compensation awarded, payment deferred, during 1929		56,867 50
Interest credited for 1929		5,408 48
		$166,200 75
Paid claimants during 1929:		
Principal	$45,786 90	
Interest	5,272 34	
		51,059 24
Balance December 31, 1929		$115,141 51

TABLE 13

SILICOSIS ACCOUNT, DECEMBER 31, 1929

Balance in fund, December 31, 1928		$256,913 77
Assessments collected under Class 5		685 85
Interest credited in 1929		9,238 55
		$266,838 17
Payments made:		
For Compensation	$64,035 37	
For Medical Aid	4,890 70	
For Salaries and Expenses	51,320 55	
For Salaries and Expenses of Referee Board	2,794 55	
		123,041 17
Balance December 31, 1929		$143,797 00

TABLE 14

INVESTMENTS, DECEMBER 31, 1929

Schedule 1

Book Value of Investments, Jan. 1, 1929	$18,622,225 08
Invested during year	3,072,731 17
	$21,694,956 25
Less Principal returned	904,653 88
Book Value of Investments, Dec. 31, 1929, Principal	20,790,302 37
Plus Accrued Interest to Dec. 31, 1929	243,907 39
Total Book Value of Investments, Dec. 31, 1929	$21,034,209 76

Schedule 2

Book Value of Investments, Jan. 1, 1929	$3,433,651 95
Invested during year	102,252 64
	$3,535,904 59
Less Principal returned	917 92
Book Value of Investments, Dec. 31, 1929, Principal	$3,534,986 67
Plus Accrued Interest to Dec. 31, 1929	34,957 06
Total Book Value of Investments, Dec. 31, 1929	$3,569,943 73

LIST OF INVESTMENTS

SCHEDULE 1 FUNDS

Municipal Debentures

Security	Yield Rate (Per Cent.)	Term	Par Value	Book Value	Accrued Interest
			$ c.	$ c.	$ c.
Amherstburg	5.50	1930–1938	14,825 07	15,153 05	39 00
Arthur	5.50	Dec. 1, 1930	279 66	276 89	1 05
Belleville:	6.25	May 1, 1941	65,000 00	63,683 17	491 51
	5.35	Jan. 2, 1942	14,000 00	14,797 61	....
	5.35	Apr. 5, 1942	13,000 00	13,762 49	185 92
	5.30	May 1, 1952	120,000 00	123,136 25	1,103 02
	5.30	1947–1949	20,000 00	19,299 85	167 12
	5.041	1943–1954	156,000 00	145,863 01	1,769 45
Bowmanville	5.27	1945–1949	41,035 25	39,940 86	1,371 60
Brampton:	5.50	1930–1934	7,552 61	7,656 44	19 85
	5.50	1930–1944	2,392 39	2,236 36	4 70
Brantford:	6.25	Dec. 31, 1942	10,000 00	8,458 28	....
	6.20	1930–1939	62,500 00	60,565 59	....
	5.972	1937–1947	52,200 00	52,326 96	....
	5.535	1940–1949	53,000 00	50,102 53	116 15
	4.95	1941–1953	13,000 00	13,835 32	31 34
	5	Dec. 31, 1950	5,000 00	4,354 48	....
Bridgeburg	5	1950–1956	13,403 01	14,328 88	401 90
Blind River (guaranteed by Province of Ontario)	4.70	1930–1948	38,725 00	38,088 52	1,164 90
Carleton Place	5.50	1930–1941	14,659 99	14,659 99	37 55
Cobourg	5.30	Jan. 1, 1934	6,000 00	5,928 70	....
Collingwood (guaranteed by County of Simcoe)	5.48	1947–1951	191,000 00	181,030 03	784 90
Cornwall	5.20	1944–1953	51,862 79	53,754 04	1,437 95
Creemore (guaranteed by County of Simcoe)	5.375	1930–1934	2,387 10	2,428 23	47 50
Dundas	5.375	1930–1946	18,688 55	18,850 69	340 75
East York, Township:	5.446	1940–1965	172,187 29	161,890 62	1,438 81
	5.448	1940–1965	72,105 65	67,800 96	306 20
Essex, Village:	5.50	1930–1934	2,947 76	2,906 95	98 55
Essex Border Utilities Commiss'n	5.484	1942–1956	199,989 88	200,370 48	10,065 25
Etobicoke, Township:	5.017	1946–1949	45,000 00	47,590 22	1,356 17
	4.95	1940–1957	25,277 74	25,420 83	848 35
	5.19	1941–1957	71,000 00	69,370 73	593 30
	4.95	1940–1958	28,416 47	28,581 72	968 60
Fort William:	5.75	Feb. 1, 1944	25,000 00	23,174 67	523 97
	6.40	May 1, 1950	10,000 00	9,545 99	100 27
	5.125	Apr. 1, 1955	55,000 00	54,030 82	685 62
	4.91	1946 & 1951	69,924 85	70,687 93	296 95
	4.91	July 1, 1952	34,672 60	35,094 99	....
	4.91	July 1, 1947	42,751 00	43,199 56	....
Fort William (guaranteeing McKellar Hospital)	4.625	May 1, 1948	88,000 00	86,642 09	661 80
Forest Hill Village:	5.036	1943–1957	44,730 93	44,519 11	747 55
	5.15	1940–1948	112,061 49	110,561 69	460 50
	5.055	1930–1958	98,494 85	97,893 71	418 25
	5.75	1934–1939	64,034 46	61,610 07	526 30
	5.60	1940–1959	121,602 70	112,727 40	....
	5.60	1934–1949	56,007 44	53,723 30	122 75
Galt:	5.622	Oct. 30, 1940	42,000 00	38,176 46	321 04
	5.65	Dec. 6, 1961	19,284 69	18,412 23	70 50
	5.30	1934–1943	83,374 04	84,606 62	3,844 33
	5.20	Dec. 1, 1962	68,400 36	71,621 42	319 50
	5.20	Dec. 1, 1962	14,135 90	15,911 06	72 03

TABLE 14—Continued

Municipal Debentures—Continued

Security	Yield Rate (Per Cent.)	Term	Par Value	Book Value	Accrued Interest
			$ c.	$ c.	$ c.
Galt:	4.95	Dec. 15, 1964	14,097 18	15,380 63	36 10
	5.05	July 2, 1965	35,254 75	37,861 41	....
Glencoe	6.75	1930–1940	12,189 24	11,436 59	503 25
Grey, County	5.24	Aug. 1, 1945	75,000 00	73,071 90	1,571 92
Guelph:	6	1940–1944	13,287 11	12,706 19	368 39
	5.183	June 30, 1942	75,000 00	73,748 35	....
	5.20	June 30, 1938	20,000 00	19,739 60	....
	4.914	June 30, 1942	50,000 00	50,396 95	....
Hamilton:	5.875	1935–1937	8,740 84	8,331 54	37 11
	5.375	Feb. 1, 1932 and 1939	5,536 91	5,582 81	127 65
	6	1932–1940	93,849 28	93,849 28	941 06
	5.90	1934–1941	164,629 81	165,697 89	3,301 62
	5.45	1937–1938	40,000 00	41,482 23	604 93
	5.50	Feb. 1, 1936	7,000 00	7,189 37	176 05
	4.95	1933–1942	150,000 00	155,920 25	3,458 22
	5.749	1941–1945	44,000 00	40,892 06	554 52
	5.714	1938–1945	190,000 00	170,500 85	3,584 00
	5.554	1938–1945	77,000 00	69,841 51	1,442 96
	5	1940–1945	97,000 00	92,271 23	1,088 25
	5	1940–1947	102,000 00	97,230 98	1,521 65
Hastings	5.50	1931–1935	4,948 17	4,847 78	21 00
Hawkesbury:	7.25	1930–1940	65,322 73	61,342 23	3,586 45
	7.25	1930–1931	2,389 05	2,346 87	59 30
Hespeler	5.50	1931–1934	7,332 71	7,332 71	101 65
Hydro-Electric Power Comm'n (guaranteed by Province of Ontario):	4.874	Aug. 1, 1957	100,000 00	86,722 13	1,676 71
	5.091	Aug. 1, 1957	195,000 00	163,425 50	3,269 60
	4.70	June 24, 1941	40,000 00	44,580 48	4.60
Kingston:	6.10	1935–1948	4,600 00	4,564 51	46.12
	6.125	1931–1945	52,400 00	51,961 76	....
	5.30	Jan. 1, 1942	35,000 00	35,614 14	....
Kingsville:	6.625	1930–1941	44,427 40	44,128 44	1,695 08
Kitchener:	5.25	1943–1951	47,682 18	49,027 19	222.73
	5.25	1943–1952	28,490 33	29,302 70	390 65
	5.75	1930–1946	976 57	959 06	11 30
	4.99	1942–1945	24,849 50	24,876 48	364 20
Leamington	5.875	1930–1932	3,995 39	4,004 49	180 15
Leaside	6	1931–1949	100,000 00	96,900 42	2,742 45
Lincoln, County	4.95	Sept. 11, 1943	90,000 00	90,449 30	1,368 50
Lindsay	5.40	Jan. 1, 1935	14,681 07	14,745 09	....
Listowel	5.875	1930–1947	15,473 86	15,040 52	354 40
London:	5.523	Aug. 3, 1939	24,000 00	21,220 87	397 15
	5.50	1937–1938	11,000 00	10,280 08	....
	6.538	June 30, 1942	25,000 00	20,165 55	3.05
	6.27	1935–1939	114,425 61	112,686 69	18.75
	5.85	June 30, 1942	50,000 00	42,977 58	6.10
	5.85	Jan. 1, 1944	50,000 00	45,983 67	....
	5.35	1940–1941	15,000 00	15,193 25	2.26
	5.35	1937–1941	75,000 00	75,848 09	11.30
	5.25	1934–1940	103,623 46	105,242 47	1,904 96
	5.23	Aug. 3, 1939	20,000 00	18,104 54	330 96
	4.955	June 30, 1945	25,000 00	25,126 53	3.42
	4.955	1938–1942	45,000 00	45,174 08	....
	4.955	1939–1945	26,000 00	26,104 01	....
	4.981	June 30, 1942	25,000 00	23,313 97	....

TABLE 14—Continued

Municipal Debentures—Continued

Security	Yield Rate (Per Cent.)	Term	Par Value	Book Value	Accrued Interest
			$ c.	$ c.	$ c.
Midland (guaranteed by County of Simcoe):	4.97	1940–1947	14,339 86	15,118 15	263 63
	4.97	1940–1944	10,720 05	11,256 68	98 52
	4.964	1940–1947	36,422 68	36,546 27	533 85
	4.971	1940–1957	47,160 21	47,332 31	1,285 60
Napanee	4.80	1941–1943	14,623 28	14,896 08	244 35
Niagara Falls:	6.60	1938–1945	50,548 31	44,059 91	1,904 19
	6.50	1934–1941	59,553 78	57,631 29	1,801 30
	5.318	1940–1953	54,098 50	55,220 77	1,744 48
	5.32	1938–1952	16,139 50	15,595 73	73 89
North Bay:	6	1938–1942	1,788 66	1,661 86	50 70
	5.70	1937–1942	76,276 50	78,056 17	3,071 93
	4.75	1937–1947	42,775 84	43,787 74	52 75
	4.75	1937–1943	17,558 14	17,186 57	530 35
	5.10	1939–1948	152,370 42	158,654 96	....
Northumberland and Durham, United Counties of	5.394	1930–1948	60,732 35	59,024 39	133 10
North Toronto (City of Toronto)	6.05	1935–1942	20,246 58	18,079 42	64 89
North York, Township:	4.97	1940–1941	8,500 00	8,880 84	372 72
	4.97	1940–1944	17,866 71	18,761 01	576 10
	4.97	1940–1943	25,811 14	27,065 72	357 80
	4.95	1943–1957	36,885 12	39,537 54	1,700 75
	4.75	1940–1948	47,687 13	48,921 11	1,998 90
	4.85	1940–1958	24,469 63	26,473 13	1,128 25
Oakville:	5.50	1930–1935	3,171 73	3,222 07	47 45
	6.625	1930–1932	4,103 51	4,057 39	25 65
Orillia (guaranteed by County of Simcoe)	4.96	1941–1954	17,156 14	17,244 23	216 20
Oshawa:	6.75	1930–1935	39,868 20	38,945 80	301 45
	6.40	1945–1951	45,133 48	43,198 84	2,270 24
	6.45	May 1, 1930	5,000 00	4,979 02	201 37
	7	1930–1932	1,010 33	967 32	40 15
	5.40	1930–1936	26,207 92	26,313 62	....
	5.375	June 1, 1938	6,068 02	5,908 58	177 88
	5.322	1939–1943	78,000 00	75,803 16	2,286 58
Ottawa:	5.522	1931–1941	39,906 66	35,677 39	....
	5.25	1932–1945	118,766 39	120,958 34	....
	6.12	July 1, 1939	10,800 00	9,158 66	....
	6.10	1937–1938	66,762 58	62,161 23	....
	5.726	July 1, 1946	100,000 00	92,333 02	....
	4.95	July 1, 1951	15,000 00	17,070 58	....
Oxford	6.25	1933–1936	9,963 03	9,396 39	292 05
Owen Sound:	5.20	Feb. 1, 1943	25,000 00	25,720 24	576 37
	4.95	Apr. 1, 1945	100,000 00	100,542 65	1,260 27
Parry Sound:	6.50	1931–1944	30,690 22	29,972 26	771 87
	7.125	1937–1950	50,235 30	45,085 42	1,263 44
Pembroke	5	1946–1954	75,025 53	75,025 53	2,199 36
Perth:	5.50	1930–1934	2,690 41	2,606 43	11 10
	5.50	1930–1943	341 70	330 47	1 40
	5.50	1930–1944	224 65	221 57	95
	5.50	1930–1934	492 67	486 98	2 05
	5.50	1930–1933	1,965 32	1,965 39	3 25
	4.95	1940–1947	52,000 00	52,266 02	1,267 95
	4.79	1940–1948	91,000 00	93,030 10	2,667 65
Peterborough:	5.184	June 30, 1946	50,000 00	48,990 19	....
	6.10	Dec. 31, 1946	15,000 00	13,267 69	....
	6.205	June 30, 1950	155,000 00	151,346 57	25 48
	6.25	Dec. 31, 1940	50,000 00	50,000 00	....
Port Arthur:	6.625	Jan. 1, 1942	11,193 32	9,706 46	....
	6.595	June 1, 1940	100,000 00	95,537 82	509 59
	6.80	Jan. 1, 1943	17,520 00	14,826 99	....

TABLE 14—Continued

Municipal Debentures—Continued

Security	Yield Rate (Per Cent.)	Term	Par Value	Book Value	Accrued Interest
			$ c.	$ c.	$ c.
Port Arthur:	6.95	Jan. 1, 1932	9,246 66	8,834 81	....
	7.05	July 1, 1932	7,786 66	7,416 94	....
	5.20	June 1, 1959	50,000 00	48,500 74	205 50
Preston	6.50	1930–1937	13,287 50	12,857 50	641 25
Renfrew:	5.75	1930–1935	6,162 79	6,215 46	33 45
	5.85	1930–1947	8,528 71	8,619 82	377 10
	4.95	1947–1958	55,034 42	55,419 02	2,080 70
Richmond Hill	5.50	1930–1944	6,906 46	6,906 46	318 40
St. Catharines:	5.385	Dec. 29, 1945	50,000 00	47,955 52	13 70
	6.312	1930–1940	27,500 00	27,729 51	....
	6.321	1930–1940	31,900 00	31,800 63	....
	5.45	1934–1942	24,750 00	25,650 84	248 18
St. Marys:	5.50	Oct. 31, 1943	4,870 30	4,645 07	....
	5.50	Jan. 1, 1944	2,500 00	2,380 07	....
St. Thomas:	6.38	1937–1951	129,562 40	124,849 08	3,258 56
	6.38	1938–1939	3,387 15	3,170 81	3.57
	5.40	1934–1937	70,000 00	72,139 22	483 29
	5.15	1949–1953	25,000 00	24,514 37	58 22
	5.20	1934–1949	39,000 00	38,271 48	90 82
Sandwich:	5.625	1930–1935	3,809 42	3,854 77	209 10
	6.625	1930–1943	19,608 22	18,834 24	738 10
	6.549	1938–1940	6,774 32	6,507 16	18 92
	6.546	1931–1949	43,418 33	41,555 96	656 61
	5.484	1944–1955	78,106 11	78,257 48	2,165 56
	5.579	1944–1947	11,000 00	10,904 74	51 40
	5.25	1944–1958	313,879 39	328,028 01	15,797 10
Sandwich West, Township	5.05	1938–1948	80,272 18	86,801 50	4,037 80
Sarnia:	6.50	1930–1939	7,142 04	6,833 21	....
	6.60	1932–1935	35,000 00	33,604 77	....
	5.217	1942–1947	62,914 68	61,474 40	792 90
Sault Ste. Marie:	5.50	Mar. 25, 1949	24,771 50	26,239 06	394 97
	6.405	Apr. 1, 1950	45,000 00	40,387 04	623 84
	6.555	Mar. 1, 1935	100,000 00	97,470 98	2,005 48
Scarborough, Township:	4.70	1940–1943	25,000 00	25,696 55	54 80
	5.35	1942–1958	75,474 03	71,975 15	165 40
	6	1930–1940	33,171 63	31,935 23	72 70
Simcoe	5.50	1930–1945	10,452 06	10,735 15	27 50
Smith's Falls:	5.50	1930–1944	9,363 52	9,363 52	431 70
	5.50	1930–1946	14,462 09	14,996 69	580 05
	5.50	1930–1936	1,107 22	1,127 25	33 30
	5.775	1930–1937	3,071 31	3,032 81	112 90
	5.776	1930–1947	12,059 50	11,808 39	443 40
	5.022	1940–1945	64,306 49	64,171 93	2,158 21
	5	1944–1946	54,000 00	54,000 00	1,812 33
Stratford:	5.50	Jan. 1, 1934	3,000 00	2,947 41	....
	5.50	Jan. 1, 1945	25,000 00	23,745 03	....
	5.50	Jan. 1, 1945	15,000 00	14,247 37	....
	5.50	Jan. 1, 1945	10,000 00	9,498 02	....
	5.625	Jan. 1, 1945	13,000 00	12,186 47	....
	6.25	Jan. 1, 1951	40,000 00	38,834 23	....
	5.40	Jan. 1, 1942	124,000 00	130,508 25	....
	5.40	Jan. 1, 1942	50,000 00	50,435 09	....
	5.401	1937–1952	83,000 00	83,557 01	....
	4.95	June 15, 1935	143,000 00	143,365 17	3,917 81
	4.95	June 15, 1940	7,000 00	7,029 23	191 78
	4.95	June 15, 1955	30,000 00	30,219 27	821 92
	4.915	Jan. 1, 1945	2,000 00	2,017 74	....
Sudbury:	5.75	1933–1935	25,263 80	24,601 34	....
	7	1930–1937	32,897 38	30,380 11	1,378 96

TABLE 14—Continued

Municipal Debentures—Continued

Security	Yield Rate (Per Cent.)	Term	Par Value	Book Value	Accrued Interest
			$ c.	$ c.	$ c.
Thorold	5.134	Aug. 15, 1958	3,000 00	2,940 30	62 90
Tillsonburg:	5.50	Mar. 20, 1945	975 00	975 00	42 16
	5.50	1930–1944	1,035 95	1,035 95	44 30
	5.50	1930–1935	2,048 33	2,048 33	87 65
	5.50	1930–1935	1,024 14	1,024 14	43 80
Toronto:	6.027	1931–1938	24,000 00	23,014 53	....
	6	1940–1943	60,000 00	54,929 52	254 79
	5.30	July 1, 1948	4,866 66	4,126 34	....
	5.25	July 1, 1942	10,000 00	9,773 49	....
	6.049	1937–1939	16,000 00	15,436 19	294 14
	6.049	Apr. 1, 1938	4,000 00	3,856 49	55 45
	6.049	1937–1938	7,000 00	6,763 75	....
	6.08	July 1, 1948	29,200 00	22,511 39	....
	6.08	July 1, 1945	7,000 00	6,239 66	....
	6.08	July 1, 1948	4,000 00	3,305 39	....
	6.05	July 1, 1948	6,326 66	4,894 24	....
	6.021	Jan. 1, 1955	19,000 00	15,290 44	....
	6	1931–1937	40,000 00	39,186 17	554 52
	6.434	1941–1948	269,000 00	257,628 35	4,068 27
	6.436	1940–1948	231,000 00	221,553 52	2,316 40
	6.24	1934–1939	49,000 00	48,398 73	982 70
	6.20	1935–1940	50,000 00	49,417 00	1,002 74
	6.25	June 1, 1951	100,000 00	97,062 69	509 59
	6.40	June 1, 1948	59,000 00	56,467 61	300 66
	6.35	1943–1944	147,000 00	142,317 06	749 10
	6.35	1942–1944	53,000 00	51,382 99	270 08
	6	1937–1940	44,000 00	42,482 03	....
	6	1936–1949	61,000 00	61,000 00	310 85
	6	1937–1947	17,000 00	16,230 16	....
	6	1942–1951	52,000 00	52,000 00	786 41
	6	1935–1940	50,000 00	48,393 19	....
	6	1937–1941	28,000 00	28,000 00	....
	6	1937–1939	9,000 00	9,000 00	45 86
	6	1937–1939	7,000 00	7,000 00	105 86
	6	1937–1939	10,000 00	10,000 00	....
	6	1937–1939	14,000 00	13,539 84	....
	6	1938–1939	9,000 00	8,689 31	....
	5.40	1939–1941	150,000 00	151,197 96	2,757 55
	5.35	Mar. 1, 1951	83,000 00	89,843 72	1,664 55
	5.35	Jan. 1, 1951	15,000 00	16,205 10	....
	5.557	Dec. 1, 1940	100,000 00	103,610 09	509 59
	5.20	1940–1942	58,000 00	57,034 06	484 66
	5.20	1940–1951	41,000 00	42,255 69	....
	5.25	Apr. 1, 1951	50,000 00	48,398 21	630 14
	5.02	1940–1951	21,000 00	23,069 66	107 01
	5.02	Mar. 1, 1940	1,000 00	1,079 22	20 05
	4.925	July 1, 1950	20,000 00	20,192 47	....
	4.925	Apr. 1, 1950	25,000 00	25,240 56	315 07
	5.265	July 1, 1944	35,000 00	32,302 54	....
	5.252	July 1, 1945	96,000 00	88,400 18	....
	4.988	July 1, 1948	58,000 00	54,615 81	....
	4.95	June 1, 1946	7,000 00	6,647 63	25 90
	4.95	1943–1945	40,000 00	38,173 20	300 82
	4.95	1943–1948	33,000 00	31,437 18	....
	4.95	1945–1951	106,000 00	106,619 51	....
	5.10	1952–1956	220,000 00	201,914 84	4,150 00
	5.03	1952–1956	145,000 00	134,202 42	2,180 95
	4.98	1952–1956	38,000 00	35,409 27	431 10
	5.05	1951–1956	262,000 00	242,456 03	2,971 75
	5.11	1951–1956	85,000 00	77,785 77	639 25
	4.968	June 1, 1939	75,000 00	80,809 04	382 20
	4.90	June 1, 1945	18,000 00	20,132 73	91 75
	4.90	Mar. 1, 1949	2,000 00	2,149 60	36 75
	4.75	June 1, 1948	2,000 00	2,304 94	10 20

TABLE 14—Continued

Municipal Debentures—Continued

Security	Yield Rate (Per Cent.)	Term	Par Value	Book Value	Accrued Interest
			$ c.	$ c.	$ c.
Toronto:	4.77	July 1, 1948	3,000 00	3,450 97	....
	4.75	1941–1951	179,000 00	205,727 46	....
	4.75	June 1, 1951	75,000 00	87,543 00	382 20
	4.82	1942–1950	30,000 00	33,927 39	152 90
	4.82	Oct. 1, 1949	25,000 00	28,759 63	378 10
	5.05	1955–1959	150,000 00	148,884 68	616 40
Toronto Harbour Commissioners:	5.30	Sept. 1, 1953	100,000 00	89,208 46	1,504 11
	5.318	Sept. 1, 1953	200,000 00	177,977 97	3,008 22
	5.318	Sept. 1, 1953	25,000 00	22,248 02	376 03
Toronto Junction (City of Toronto)	6.187	Jan. 2, 1943	33,000 00	28,121 48	....
Toronto, Township	4.95	1941–1952	18,104 29	19,290 75	627 42
Trenton	5	1942–1943	25,000 00	26,212 07	1,103 76
Wallaceburg	5.625	May 1, 1930	834 01	836 38	33 45
Walkerville:	6.597	1930–1942	26,315 47	25,421 60	73 55
	6.271	1942–1948	17,531 70	16,175 60	47 54
	5	1949–1951	99,038 43	111,744 11	276 75
	4.70	1942–1947	25,511 95	26,316 50	59 40
Welland City:	5.40	Sept. 1, 1934	25,000 00	25,106 27	459 58
	5.439	Apr. 1, 1939	42,000 00	43,723 89	635 18
Welland, County:	5.38	Dec. 15, 1945	10,000 00	9,599 85	23 28
Weston:	5.50	Mar. 1, 1930	582 81	583 38	29 30
	5	1949–1952	24,949 65	28,196 23	65 60
West Gwillimbury Township (guaranteed by Co. of Simcoe)	5.459	1942–1956	36,107 36	36,283 63	....
Whitby:	5.375	1930–1946	11,557 04	11,663 61	99 25
	5.375	1930–1946	3,059 39	3,092 90	28 10
	5.38	1930–1946	5,232 84	5,286 96	44 95
Windsor:	5.563	1930–1935	11,665 41	11,636 06	28 15
	6.413	1942–1950	200,257 35	191,730 16	1,020 30
	6.05	1938–1940	32,977 61	32,849 64	585 45
	6.10	Sept. 15, 1941	12,337 43	12,232 90	219 01
	6.05	June 1, 1940	13,000 00	12,950 01	66 25
	5.32	1946–1952	110,000 00	112,341 91	1,525 00
	5.101	June 1, 1951	24,000 00	26,798 52	122 30
Woodstock:	5.625	Dec. 31, 1936	7,045 32	6,596 69	....
	5.625	Nov. 1, 1938	10,000 00	9,233 62	....
	5.625	Nov. 30, 1937	6,000 00	5,578 22	....
York, Township:	4.958	1941–1946	100,000 00	100,415 88	424 66
	5.572	1941–1951	102,407 13	106,870 13	2,053 75
	5.408	1949–1956	225,000 00	213,153 59	4,715 77
	4.979	1942–1946	195,000 00	195,424 58	4,087 00
	5	1945–1955	22,000 00	22,000 00	93 45
	4.85	Feb. 1, 1952	25,000 00	25,509 19	524 00
	4.85	1941–1949	20,731 26	22,200 00	....
	4.93	1941–1952	8,679 27	9,741 70	174 05
	4.93	1941–1952	27,659 28	31,095 31	695 65
	5.08	1945–1958	74,000 00	73,176 81	922 45
York, Township (guaranteed by County of York):	5.39	1951–1956	93,000 00	88,062 89	394 95
	4.95	1946–1957	21,000 00	21,140 80	350 95
			15,785,796 18	15,503,954 43	212,994 08

TABLE 14—Continued

Other Permanent Investments

Security	Yield Rate (Per Cent.)	Term	Par Value	Book Value	Accrued Interest
			$ c.	$ c.	$ c.
Canadian National Railway Company (guaranteed by Dominion of Canada)	5.07	July 1, 1969	200,000 00	197,510 00	....
Canadian Northern Railway Company (guaranteed by Dominion of Canada):	4.93	July 1, 1946	30,000 00	35,277 74	....
	4.914	July 1, 1946	100,000 00	117,789 72	....
	4.915	July 1, 1946	10,000 00	11,777 56	....
	4.93	July 1, 1946	18,000 00	21,161 65	....
	4.893	July 1, 1946	10,000 00	11,804 86	....
	4.90	July 1, 1946	50,000 00	58,982 91	....
	4.947	July 1, 1946	37,000 00	43,425 51	....
	5.246	July 1, 1946	65,000 00	73,916 66	....
	5.196	July 1, 1946	469,000 00	536,201 88	....
	4.875	July 1, 1946	100,000 00	118,280 84	....
	5.051	July 1, 1946	200,000 00	232,182 95	....
Dominion of Canada Guaranteed Debenture Stock of the Canadian Northern Ry. Co.:	5.163	July 20, 1958	243,333 00	182,844 07	3,850 05
	4.75	July 20, 1958	16,000 00	12,868 36	253 15
Ontario, Province of:	5.178	Oct. 15, 1948	250,000 00	244,665 25	263 70
	5.88	Feb. 1, 1941	50,000 00	50,503 56	1,257 53
	5.449	Dec. 1, 1950	700,000 00	617,499 41	2,675 30
	5.458	Dec. 1, 1949	300,000 00	265,263 52	1,146 60
	5	Sept. 15, 1943	50,000 00	54,992 32	879 45
	5.371	Dec. 1, 1947	13,000 00	11,703 55	49 70
	4.875	Oct. 15, 1948	50,000 00	50,770 66	520 55
	4.875	Oct. 15, 1948	60,000 00	60,922 38	624 66
	4.871	Oct. 15, 1948	25,000 00	25,396 44	260 27
	4.875	Oct. 15, 1948	50,000 00	50,768 88	520 55
	4.86	Jan. 15, 1956	500,000 00	473,237 98	10,417 80
	4.90	Sept. 15, 1943	185,000 00	205,442 69	3,253 95
	4.80	Dec. 1, 1942	115,000 00	122,715 97	537 20
	4.85	Sept. 15, 1943	9,000 00	10,043 26	158 30
	4.85	Sept. 15, 1943	57,500 00	64,163 61	1,011 35
	4.85	Sept. 15, 1943	30,000 00	33,489 71	527 65
	4.85	Sept. 15, 1943	30,000 00	33,477 47	527 65
	4.75	Sept. 15, 1943	7,000 00	7,887 05	123 10
	5.016	May 1, 1959	250,000 00	249,379 52	2,054 80
			4,279,833 00	4,286,347 94	30,913 31
Total Permanent Investments, Schedule 1.........			20,065,629 18	19,790,302 37	243,907 39

TABLE 14—Continued
SCHEDULE 2 FUNDS

Security	Yield Rate (Per Cent.)	Term	Par Value $ c.	Book Value $ c.	Accrued Interest $ c.
Barton, Township	5.354	July 14, 1952	63,000 00	64,211 65	1,604 34
Belleville:	5.669	1943–1945	3,450 26	3,224 16	....
	5.613	1943–1950	8,000 00	7,460 36	17 55
	5.704	1940–1946	10,488 47	9,796 58	219 80
Brantford	5.42	Dec. 31, 1949	15,000 00	12,420 17	....
Chippawa, Town (guaranteed by County of Welland)	5.525	1941–1944	22,578 30	22,524 16	520 52
Cornwall	5.535	1941–1943	10,248 45	10,212 54	284 13
Etobicoke, Township:	5.485	1941–1955	24,867 79	23,475 09	415 60
	5.07	1941–1956	32,574 89	32,325 19	1,227 13
	5.067	1942–1956	58,470 29	61,533 39	2,422 90
Galt	5.34	Dec. 15, 1965	19,460 45	18,405 07	42 65
Hamilton:	5.697	1942–1946	152,000 00	134,183 44	2,867 18
	5.54	1942–1946	134,000 00	120,220 04	512 15
	5.444	1942–1946	35,000 00	33,442 29	292 47
Hydro-Electric Power Commission (guaranteed by Province of Ontario)	5.45	June 24, 1941	15,000 00	15,695 23	17 25
Kingston	5.453	July 1, 1955	120,000 00	112,554 92	....
Kitchener	5.475	1944–1947	10,418 06	11,013 96	104 45
London:	5.444	Dec. 30, 1954	411,000 00	386,246 81	....
	5.439	1940–1956	280,000 00	267,514 70	76 70
	5.26	1940–1955	101,000 00	98,299 65	....
North Bay	5.799	1940–1943	33,000 00	32,123 94	1,516 65
Ontario, Province of:	5.528	Oct. 1, 1942	31,000 00	29,501 77	390 68
	5.376	Apr. 1, 1952	19,000 00	18,076 34	239 45
	4.875	Oct. 15, 1948	50,000 00	50,770 30	520 55
Ottawa	5.574	1941–1946	36,000 00	34,078 17	....
Owen Sound	4.95	Apr. 1, 1945	125,000 00	125,678 30	1,575 34
Peterborough	5.514	Dec. 31, 1945	20,000 00	18,920 43	....
Renfrew	5.40	1949–1953	50,234 63	50,878 96	461 73
Stamford, Township	5.458	1941–1954	246,628 19	247,854 42	408 80
Stratford:	5.201	July 1, 1954	82,000 00	83,113 45	2,190 86
	5.611	1940–1956	122,613 19	115,128 33	3,359 25
Thorold	5.50	1940–1959	49,546 82	46,609 22	617 60
Toronto:	6.325	June 1, 1940	4,000 00	3,905 73	20 38
	6.325	June 1, 1942	21,000 00	20,415 92	107 01
	6.254	1937–1940	130,000 00	127,867 93	662 55
	5.557	Dec. 1, 1940	100,000 00	103,610 09	509 59
	5.25	1940–1943	42,000 00	44,657 02	214 03
	5.25	1950–1951	50,000 00	48,408 86	630 14
	4.99	July 1, 1948	24,333 33	21,431 36	....
	5.287	1948–1954	172,000 00	154,802 13	1,293 53
	5.269	1948–1954	154,000 00	138,855 31	588 57
	5.572	1947–1954	229,000 00	197,657 16	3,444 40
	5.458	Jan. 1, 1949	5,000 00	4,429 39	....
	5.455	July 1, 1950	4,000 00	3,779 39	....
	4.75	June 1, 1950	40,000 00	46,505 39	203 85
	5.05	June 1, 1954	50,000 00	49,628 63	205 50
Toronto Harbour Commissioners:	5.70	Sept. 1, 1953	51,000 00	43,046 35	767 10
	5.30	Sept. 1, 1953	18,000 00	16,057 53	270 74
	5.30	Sept. 1, 1953	25,000 00	22,302 11	376 03
	5.268	Sept. 1, 1953	141,000 00	126,352 14	2,120 79
	5.25	Sept. 1, 1953	50,000 00	44,918 76	752 05
Waterloo, Town	5.68	1941–1947	19,195 72	18,862 44	885 07
Total Permanent Investments, Schedule 2.........			3,721,108 84	3,534,986 67	34,957 06

SHORT DATE DEPOSITS, SCHEDULE 1

Canada Permanent Mortgage Corporation, Special Deposit—5½ per cent. withdrawable as required	$650,000 00
Canada Trust Co. (Huron & Erie Mortgage Corporation), Short date Debentures—5½ per cent. withdrawable on short notice	350,000 00
Total Short Date Deposits, Schedule 1	$1,000,000 00

CHAPTER V

1928 OPERATIONS

This chapter deals with the year 1928, containing information which was not available when the report for that year was made.

It gives the final financial statement for Schedule 1 industries for the year, estimates of the adjustments of assessments and of the outstanding compensation and medical aid having to be used in the provisional statement given in Table 1 of the 1928 report; and it gives statistical information as to the accidents which happened during 1928, their causes, the nature of the injuries suffered, the number, time loss, total and average cost of the different classes of cases, and the age, wage, nationality, and marital condition of the injured workmen.

This information is contained in Tables 15 to 27.

Final Financial Statement, Schedule 1, 1928

Table 15 gives the final financial statement for Schedule 1 industries for 1928, provisional figures for which were given in Table 1 of the 1928 report. It shows the income and credits and the expenditure and charges and the balance, for each class of industry; also the actual assessments and accident cost and other items of income and expenditure for each class, and the assessments and accident cost for each group of industry within the class. The list of industries included in each class and group will be found in the Board's rate book, the list of industries in the different classes is also printed with the Act, and their general nature is indicated at the bottom of Table 1 of this report.

The net income and credits for all the clasess for the year were $6,964,405.48, and the net expenditure and charges, $6,539,875.41, leaving a surplus for the year of $424,530.07. Adding the surplus forward from prior years, $654,350.04, leaves a net actual surplus of $1,078,880.11, as compared with a provisional or estimated surplus of $542,084.80, the disparity being largely due to claims for accidents occurring in 1928 not being finally disposed of during 1929.

Assessments and Accident Cost

The assessments and accident cost (the latter comprising compensation and medical aid and payments on account of rehabilitation) in Schedule 1 for each year since the commencement of the Act, and the totals to the end of 1928, are as follows:

Year	Assessment	Accident Cost
1915	$1,831,537 52	$1,091,020 43
1916	2,361,463 20	1,880,004 37
1917	2,662,383 29	2,639,560 56
1918	3,303,575 83	3,214,427 57
1919	3,840,949 07	4,474,847 38
1920	5,579,333 45	5,041,947 30
1921	4,594,452 37	4,277,034 67
1922	3,984,594 64	4,323,801 07
1923	3,771,321 09	4,977,331 82
1924	4,524,700 86	4,746,314 60
1925	4,390,854 75	4,438,802 13
1926	5,167,126 64	4,711,970 90
1927	5,465,763 17	5,082,073 61
1928	6,739,696 80	6,083,772 14
Totals	$58,217,752 68	$56,982,908 55

Pay Roll and Rates of Assessment

As assessments are in the form of a percentage of pay roll, the average rate paid by employers in Schedule 1 can be determined by dividing the total assessments for the year by the total payroll. The following table shows the total amount of payroll and the total assessments and the average rate for $100 payroll for each year:

Year	Total Pay Roll	Total Assessments	Average Rate per $100
1915	$147,603,000	$1,831,537 52	$1 24
1916	220,840,000	2,361,463 20	1 07
1917	286,903,000	2,662,383 29	93
1918	310,450,000	3,303,575 83	1 06
1919	325,226,000	3,840,949 07	1 18
1920	464,589,000	5,579,333 45	1 20
1921	355,259,000	4,594,452 37	1 29
1922	391,888,000	3,984,594 64	1 02
1923	434,163,000	3,771,321 09	87
1924	386,318,000	4,524,700 86	1 17
1925	390,652,000	4,390,854 75	1 04
1926	424,926,000	5,167,126 64	1 22
1927	455,016,000	5,465,763 17	1 20
1928	504,102,000	6,739,696 80	1 34

Final Accident Figures, 1928

Table 16 shows the number of accidents happening in 1928 (in all industries under the Act) for which payment of compensation or medical aid was made. The total number was 65,468, of which 414 were death cases, 2,926 cases involving some degree of permanent disability, 30,440 temporary disability cases, and 31,688 cases which involved medical aid only. Schedule 2 cases involving medical aid only are not included as in these cases medical aid is furnished directly by the employer.

The complete figures for each year since the commencement of the Act are as follows:

Year	Medical Aid Only	Temporary Disability	Permanent Disability	Death	Totals
1915	*.....	9,311	1,339	296	10,946
1916	*.....	15,993	2,232	373	18,598
1917	†4,267	21,556	2,475	370	28,668
1918	12,822	24,089	2,624	366	39,901
1919	11,769	22,418	2,457	364	37,008
1920	15,566	27,423	2,735	373	46,097
1921	12,141	22,855	2,079	331	37,406
1922	15,913	24,461	2,082	325	42,781
1923	20,125	28,954	2,340	327	51,746
1924	20,811	25,980	2,191	315	49,297
1925	22,444	26,040	2,157	264	50,905
1926	25,330	27.150	2,421	308	55,209
1927	27,852	28,836	2,476	311	59,475
1928	31,688	30,440	2,926	414	65,468
Totals	220,728	335,506	32,534	4,737	593,505

*No Medical aid. †Half year only.

Accident Frequencies, Schedule 1

Comparison of accident frequencies can be made by correlating the number of accidents with the total number of full-year workers, data for this being available, however, only in Schedule 1. Eliminating accidents in which medical aid only was paid, the number of accidents for each 100 full-year workers for the different years are:

Year	Temporary Disability	Permanent Disability	Death	Totals
1915	3.63	.58	.12	4.32
1916	4.99	.79	.10	5.88
1917	5.78	.72	.07	6.57
1918	5.81	.66	.07	6.54
1919	5.81	.68	.07	6.56
1920	6.23	.67	.07	6.97
1921	6.25	.60	.05	6.90
1922	5.82	.52	.06	6.40
1923	6.02	.51	.05	6.58
1924	6.08	.54	.06	6.68
1925	5.94	.51	.05	6.50
1926	5.84	.54	.05	6.43
1927	5.94	.53	.05	6.52
1928	5.85	.58	.07	6.50

On the same basis of calculation, the frequency of medical aid only cases has been: 1918, 3.66; 1919, 3.70; 1920, 4.26; 1921, 4.24; 1922, 4.67; 1923, 4.96; 1924, 5.84; 1925, 6.09; 1926, 6.37; 1927, 6.73; and 1928, 7.09.

Statistical Distributions

Tables 17 to 27 give statistical details regarding accidents and workmen, including, where the data is available, Schedule 2 and Crown cases as well as Schedule 1. Considerations of space preclude more extensive tabulations, but the original material is retained and still fuller information is always available concerning the accidents in any of the different classes of industry.

Month of Occurrence

Table 17 gives the month of occurrence of all accidents. The month in which the greatest number occurred during 1928 was October with 6,615, and the month with the lowest number was January, with 4,354.

Accidents According to Locality

The distribution of accidents according to the county or district in which they occurred, is contained in Table 18. York had the highest number with 17,347, and next in order were Temiskaming with 5,678, Wentworth with 4,146, Welland with 3,740, and Essex with 3,533. The greatest number of deaths, 87, were in Temiskaming: there were 64 in York, 42 in Welland, 23 in Sudbury, and 17 in Thunder Bay.

Time Loss, Age, and Wage

In Table 19 is given the average age and wage of workmen receiving compensation, and the total and average time loss for each class of industry and for each category of disability. The average age for 1928 was 34.56 years. The average weekly wage for 1928 was $23.65, as compared with $23.11 for 1927, and $22.64 for 1926. The total time loss in temporary disability cases was 639,448 days, or an average of 21.01 days, as compared with an average of 21.05 days in 1927, and 20.74 days in 1926.

Compensation and Medical Aid Costs, Schedule 1

Table 20 contains the total and average cost of compensation and medical aid by classes in Schedule 1 for each kind of disability.

The total cost of all accidents was $6,083,772.14, of which $4,835,091.46 was for compensation (including payments for rehabilitation) and $1,248,680.68 was for medical aid.

Of the $4,835,091.46 compensation cost, $1,793,600.21 was for temporary disability cases, $1,930,598.25 was for permanent disability cases, and $1,110,893.00 was for death cases.

The average cost of temporary disability cases was $97.18, of which $68.61 was for compensation and $28.57 was for medical aid, the average in 1927 being $86.13, and in 1926, $77.41.

The average cost of permanent disability cases was $871.38, of which $216.61 was for temporary disability, $533.09 for permanent disability, and $121.68 for medical aid.

The average cost of death cases where there were dependants was $4,940.18, and the average cost for all death cases was $3,546.23, of which $20.43 was for temporary disability, $122.87 for burial expenses, $41.84 for medical aid, and $3,361.09 for death benefits.

The average cost of all cases in which compensation was paid was $203.46, of which $166.50 was for compensation and $36.96 for medical aid, as compared with $183.14 for 1927, and $180.18 for 1926.

The average cost of medical aid in medical aid only cases was $5.54, as compared with $5.49 in 1927, and $5.42 in 1926.

Allegiance of Injured

Table 21 shows the allegiance of injured workers who received compensation, as taken from their own reports. There were 28,459, or nearly 85 per cent., of British allegiance, and 5,321 of alien allegiance. Among the aliens the most numerous were Italians, Poles, Russians, Finlanders, and Czechs.

Sex and Marital Condition of Injured

Table 22 gives the sex and marital condition of those receiving compensation. There were 33,422 males and 358 females. Of the males, 19,873 were married, and 58 of the females. There were 464 widowers and 36 widows. One female was killed.

Duration of Disability

Table 23 shows the week of termination of temporary disability cases. In 47 per cent. of the cases the disability terminated in from one to two weeks. In 25 cases the disability lasted more than a year.

Nature of Injuries

The first part of Table 24 shows the number of various kinds of temporary disability injuries in the different classes of industry, the second part gives an analysis of the permanent disability cases, showing the number of injuries to the several parts of the body and the percentages of impairment of earning capacity, and the third part of the table shows the number and nature of the industrial disease cases.

During 1928 there were 11,221 cuts, lacerations, and punctures; 7,626 bruises, contusions, and abrasions; 3,382 fractures; 2,818 sprains, strains, twistings, and wrenchings; 2,500 crushes; 1,308 scalds and burns; 925 injuries to eyes; 184 dislocations and 140 herniae, among the temporary disabilities.

Among the 2,926 permanent disabilities were 14 permanent total disability cases, and 310 cases exceeded 10 per cent. of working capacity.

There were 108 industrial disease cases, of which 37 involved medical aid only, 56 were temporary disability cases, 6 were permanent disability cases, and 9 were death cases. Included in these totals are 30 cases of lead poisoning, 18 cases of silicosis, 56 cases of caisson disease, 3 cases of benzol poisoning, and 1 case of anthrax.

Causes of Accidents

Table 25 gives the prime causes of accidents in 1928. Machinery was responsible for 13,548 out of a total of 65,468, or 20.70 per cent. of all cases as compared with 19.40 per cent. in 1927, and 19.60 per cent. in 1926.

Blood-Poisoning Cases

The number of compensation cases in which the seriousness of the accident was due to concurrent or subsequent infection rather than to the nature of the wound is shown in Table 26. There were 2,171 such cases, or 6.4 per cent. of all cases compensated, including 59 cases of permanent disability and 10 deaths.

Death Cases

The nature of awards, the number, relationship, and residence of the dependants, are shown in Table 27.

TABLE 15

FINAL FINANCIAL STATEMENT FOR 1928, SCHEDULE 1

BY CLASSES

Class	Income and Credits	Expenditure and Charges	Balance for 1928	Balance forward Prior Years	Balance at Dec. 31, 1928	Class
	$ c.	$ c.	$ c.	$ c.	$ c.	
1	833,552 62	747,561 04	85,991 58	—326,375 20	—240,383 62	1
2	358,681 75	308,953 42	49,728 33	2,073 26	51,801 59	2
3	103,521 25	112,520 69	—8,999 44	—6,937 19	—15,936 63	3
4	209,017 55	200,335 86	8,681 69	—6,397 59	2,284 10	4
5	855,305 44	782,787 94	72,517 50	341,635 51	414,153 01	5
6	255,019 02	201,638 89	53,380 13	56,592 18	109,972 31	6
7	137,096 33	117,946 64	19,149 69	117,141 02	136,290 71	7
8	170,036 74	158,164 98	11,871 76	4,026 18	15,897 94	8
9	299,918 57	289,189 25	10,729 32	42,152 82	52,882 14	9
10	284,385 15	284,703 99	—318 84	125,121 59	124,802 75	10
11	390,727 18	417,725 49	—26,998 31	9,212 15	—17,786 16	11
12	179,130 01	176,580 12	2,549 89	70,478 75	73,028 64	12
13	91,560 31	85,593 04	5,967 27	—36,261 26	—30,293 99	13
14	62,252 05	70,262 65	—8,010 60	3,188 57	—4,822 03	14
15	260,757 05	284,241 72	—23,484 67	69,517 10	46,032 43	15
16	182,311 96	173,047 98	9,263 98	34,744 09	44,008 07	16
17	120,402 89	114,149 28	6,253 61	54,232 74	60,486 35	17
18	74,287 44	50,613 91	23,673.53	—757 31	22,916 22	18
19	55,240 95	65,787 45	—10,546 50	53,888 11	43,341 61	19
20	213,052 57	200,376 93	12,675 64	—12,774 87	—99 23	20
21	325,764 55	299,696 72	26,067 83	—13,132 72	12,935 11	21
22	118,357 39	129,797 40	—11,440 01	—7,053 05	—18,493 06	22
23	558,271 64	460,139 52	98,132 12	73,976 16	172,108 28	23
24	825,755 07	808,060 50	17,694 57	6,059 00	23,753 57	24
	†6,964,405 48	*6,539,875 41	424,530 07	654,350 04	1,078,880 11	

†Includes,$12,620.64 reimbursement from D.P. & N.H.; Disaster Reserve (Class 5), $50,000.

*Includes $4,428.25 for Rehabilitation.

TABLE 15—Continued
BY GROUPS

Assessments and Compensation			Other Credits and Charges			
Group and Class	Assessments	Compensation and Medical Aid	Interest, Secs. 83 (4), 8, 105, 112 (3), etc.	Disaster Reserve, Administration Expenses and Safety Assns.	Balance Forward Prior Years	Balance at December 31, 1928
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Group 010	428,444 97	357,027 03				
" 011	281,081 64	191,935 48				
" 012	118,602 63	132,689 03				
Class 1	828,129 24	681,651 54	5,423 38	65,909 50	—326,375 20	—240,383 62
Group 020	244,344 47	183,542 52				
" 021	25,277 44	24,471 90				
" 022	76,556 13	69,703 29				
Class 2	346,178 04	277,717 71	12,503 71	31,235 71	2,073 26	51,801 59
Group 030	67,882 91	74,572 83				
" 031	12,730 26	11,721 64				
" 032	11,547 29	4,590 55				
" 033	10,624 98	13,145 73				
Class 3	102,785 44	104,030 75	735 81	8,489 94	—6,937 19	—15,936 63
Group 040	110,884 55	101,242 99				
" 041	39,807 59	28,067 89				
" 042	16,145 55	10,484 93				
" 043	10,048 38	7,978 25				
" 044	28,511 77	33,625 42				
Class 4	205,397 84	181,399 48	3,619 71	18,936 38	—6,397 59	2,284 10
Group 050	33,147 26	19,493 11				
" 051	511,547 06	492,491 62				
" 052	113,691 79	126,720 36				
" 053	53,247 33	42,769 25				
" 054	3,791 52	16,989 61				
" 055	21,507 19	18,490 91				
" 056	31,035 71	21,060 79				
" 057	2,505 89	4,842 74				
Class 5	770,473 75	742,858 39	84,831 69	39,929 55	341,635 51	414,153 01
Group 060	38,311 59	25,559 08				
" 061	62,947 33	43,929 22				
" 062	19,343 16	18,952 99				
" 063	38,920 61	25,088 34				
" 064	12,718 86	6,849 39				
" 065	47,281 51	38,835 08				
" 066	25,617 28	23,001 77				
Class 6	245,140 34	182,215 87	9,878 68	19,423 02	56,592 18	109,972 31
Group 070	98,354 42	91,272 15				
" 071	27,636 86	17,022 95				
Class 7	125,991 28	108,295 10	11,105 05	9,651 54	117,141 02	136,290 71
Group 080	64,026 06	57,672 52				
" 081	22,069 85	17,115 30				
" 082	68,050 28	55,437 70				
" 083	13,833 88	15,497 07				
Class 8	167,980 07	145,722 59	2,056 67	12,442 39	4,026 18	15,897 94

TABLE 15—Continued
BY GROUPS

Assessments and Compensation			Other Credits and Charges			
Group and Class	Assessments	Compensation and Medical Aid	Interest, Secs. 83 (4), 8, 105, 112 (3), etc.	Disaster Reserve, Administration Expenses and Safety Assns.	Balance Forward Prior Years	Balance at December 31, 1928
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Group 090	61,587 72	62,632 76				
“ 091	19,126 83	17,720 33				
“ 092	10,586 94	10,667 67				
“ 093	35,409 80	32,328 87				
“ 094	150,700 99	132,224 00				
“ 095	16,948 35	10,863 94				
Class 9	294,360 63	266,437 57	5,557 94	22,751 68	42,152 82	52,882 14
Group 100	36,965 62	25,695 02				
“ 101	94,666 48	93,547 57				
“ 102	44,183 19	58,886 63				
“ 103	27,656 82	23,421 04				
“ 104	21,960 27	20,825 25				
“ 105	20,664 85	16,654 29				
“ 106	15,950 70	16,719 97				
“ 107	8,622 53	5,509 25				
Class 10	270,670 46	261,259 02	13,714 69	23,444 97	125,121 59	124,802 75
Group 110	96,950 88	85,899 00				
“ 111	220,565 42	218,390 52				
“ 112	27,623 87	27,687 68				
“ 113	38,124 06	59,313 43				
Class 11	383,264 23	391,290 63	7,462 95	26,434 86	9,212 15	—17,786 16
Group 120	50,226 76	41,164 91				
“ 121	50,660 94	45,992 60				
“ 122	40,345 63	42,860 09				
“ 123	8,914 18	12,193 88				
“ 124	23,404 04	22,728 61				
Class 12	173,551 55	164,940 09	5,578 46	11,640 03	70,478 75	73,028 64
Group 130	56,296 74	43,749 41				
“ 131	34,782 89	37,731 10				
Class 13	91,079 63	81,480 51	480 68	4,112 53	—36,261 26	—30,293 99
Group 140	61,411 60	65,664 88				
Class 14	61,411 60	65,664 88	840 45	4,597 77	3,188 57	—4,822 03
Group 150	60,588 12	56,806 21				
“ 151	47,126 80	49,082 24				
“ 152	20,932 13	15,365 64				
“ 153	30,605 00	40,215 12				
“ 154	24,092 60	23,614 64				
“ 155	58,760 72	76,697 26				
“ 156	2,839 62	2,016 66				
Class 15	244,944 99	263,797 77	15,812 06	20,443 95	69,517 10	46,032 43
Group 160	30,122 44	28,308 56				
“ 161	24,309 99	19,814 45				
“ 162	12,233 47	8,469 54				
“ 163	79,364 47	74,707 55				
“ 164	29,846 59	26,527 54				
Class 16	175,876 96	157,827 64	6,435 00	15,220 34	34,744 09	44,008 07

TABLE 15—Continued
BY GROUPS

Assessments and Compensation			Other Credits and Charges			
Group and Class	Assessments	Compensation and Medical Aid	Interest, Secs. 83 (4), 8, 105, 112 (3), etc.	Disaster Reserve, Administration Expenses and Safety Assns.	Balance Forward Prior Years	Balance at December 31, 1928
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Group 170	48,661 95	45,600 35				
" 171	49,579 96	44,009 53				
" 172	17,137 67	18,043 35				
Class 17	115,379 58	107,653 23	5,023 31	6,496 05	54,232 74	60,486 35
Group 180	54,258 82	33,114 08				
" 181	17,666 30	11,672 53				
Class 18	71,925 12	44,786 61	2,362 32	5,827 30	—757 31	22,916 22
Group 190	13,674 56	19,141 80				
" 191	21,367 52	31,257 89				
" 192	7,101 79	4,829 60				
" 193	7,352 90	5,151 17				
Class 19	49,496 77	60,380 46	5,744 18	5,406 99	53,888 11	43,341 61
Group 200	126,425 73	107,613 78				
" 201	82,809 11	81,230 71				
Class 20	209,234 84	188,844 49	3,817 73	11,532 44	—12,774 87	—99 23
Group 210	185,392 25	169,286 90				
" 211	139,333 86	115,652 17				
Class 21	324,726 11	284,939 07	1,038 44	14,757 65	—13,132 72	12,935 11
Group 220	117,837 43	118,162 07				
Class 22	117,837 43	118,162 07	519 96	11,635 33	—7,053 05	—18,493 06
Group 230	167,865 42	138,456 62				
" 231	324,762 13	254,099 96				
" 232	58,597 84	43,958 99				
Class 23	551,225 39	436,515 57	7,046 25	23,623 95	73,976 16	172,108 28
Group 240	98,230 01	106,075 92				
" 241	30,739 93	23,516 02				
" 242	64,674 32	74,161 04				
" 243	19,070 82	24,112 01				
" 244	54,320 66	55,138 10				
" 245	65,511 02	40,330 80				
" 246	30,955 62	36,568 89				
" 247	27,011 79	26,798 95				
" 248	413,803 47	370,406 99				
" 249	8,317 87	8,792 38				
Class 24	812,635 51	765,901 10	13,119 56	42,159 40	6,059 00	23,753 57
Schedule 1	6,739,696 80	*6,083,772 14	†224,708 68	456,103 27	654,350 04	1,078,880 11

†Includes $12,620.64 reimbursement from D.P. & N.H.; Disaster Reserve (Class 5), $50,000.

*Includes $4,428.25 for Rehabilitation.

TABLE 16

NUMBER OF ACCIDENTS IN 1928 INVOLVING PAYMENT

Class	Medical Aid Only	Temporary Disability	Permanent Disability	Death	TOTALS
1	827	2,851	272	41	3,991
2	1,805	1,464	112	17	3,398
3	774	563	95	2	1,434
4	933	843	129	4	1,909
5	2,075	2,064	188	88	4,415
6	700	688	82	5	1,475
7	235	349	44	2	630
8	1,652	879	67	3	2,601
9	2,706	1,331	159	7	4,203
10	3,614	1,618	222	4	5,458
11	2,360	1,722	213	7	4,302
12	745	707	62	9	1,523
13	291	324	35	3	653
14	1,039	375	29	...	1,443
15	1,868	1,270	123	8	3,269
16	772	703	85	3	1,563
17	713	602	62	1	1,378
18	531	447	15	...	993
19	525	437	47	...	1,009
20	518	1,024	62	9	1,613
21	956	1,070	87	18	2,131
22	168	156	13	9	346
23	2,006	1,169	107	45	3,327
24	3,821	3,485	268	36	7,610
Schedule 2	....	2,303	177	64	2,544
Crown Cases	54	1,996	171	29	2,250
TOTALS	31,688	30,440	2,926	414	65,468

TABLE 17

MONTH OF OCCURRENCE OF ACCIDENTS, 1928

Month of Occurrence	Medical Aid Only	Temporary Disability	Permanent Disability	Death	TOTALS
January	1,897	2,222	205	30	4,354
February	2,011	2,336	198	70	4,615
March	2,343	2,180	191	17	4,731
April	2,292	1,991	208	24	4,515
May	2,958	2,383	253	36	5,630
June	2,911	2,637	251	29	5,828
July	3,123	2,797	250	31	6,201
August	3,262	2,964	276	35	6,537
September	2,826	2,753	262	40	5,851
October	3,186	3,056	320	53	6,615
November	2,666	2,767	267	25	5,725
December	2,213	2,354	245	24	4,836
TOTALS	31,688	30,440	2,926	414	65,468

TABLE 18

LOCALITY OF ACCIDENTS, 1928

County or District	Medical Aid Only	Temporary Disability	Permanent Disability	Death	TOTALS
Algoma	395	1,004	99	12	1,510
Brant	499	527	49	4	1,079
Bruce	50	125	20	1	196
Carleton	635	945	100	10	1,690
Dufferin	26	42	3	..	71
Dundas	18	54	6	1	79
Durham	228	111	10	..	349
Elgin	132	190	14	4	340
Essex	2,138	1,232	147	16	3,533
Frontenanc	329	209	26	3	567
Glengarry	13	17	1	..	31
Grenville	234	76	6	1	317
Grey	290	233	36	10	569
Haldimand	102	116	15	1	234
Haliburton	9	39	2	1	51
Halton	133	165	24	..	322
Hastings	448	525	55	4	1,032
Huron	61	118	12	2	193
Kenora	129	347	30	10	516
Kent	469	216	23	1	709
Lambton	337	310	39	3	689
Lanark	91	232	25	4	352
Leeds	285	169	12	3	469
Lennox and Addington	46	48	4	..	98
Lincoln	742	511	52	8	1,313
Manitoulin	4	38	4	2	48
Middlesex	488	814	66	7	1,375
Muskoka	49	186	21	2	258
Nipissing	93	424	44	6	567
Norfolk	94	104	8	..	206
Northumberland	45	85	11	1	142
Ontario	588	579	58	1	1,226
Oxford	433	321	28	1	783
Parry Sound	182	333	30	5	550
Patricia	55	59	5	1	120
Peel	65	82	7	1	155
Perth	263	305	30	..	598
Peterborough	446	343	29	4	822
Prescott	135	93	7	1	236
Prince Edward	8	18	1	..	27
Rainy River	314	418	25	9	766
Renfrew	311	408	45	5	769
Russell	73	30	6	..	109
Simcoe	534	519	53	4	1,110
Stormont	234	234	29	5	502
Sudbury	321	1,008	111	23	1,463
Temiskaming	3,044	2,338	209	87	5,678
Thunder Bay	1,136	1,635	143	17	2,931
Victoria	67	115	9	2	193
Waterloo	1,315	863	88	6	2,272
Welland	2,333	1,244	121	42	3,740
Wellington	480	432	28	1	941
Wentworth	2,032	1,843	256	15	4,146
York	8,699	7,951	633	64	17,347
Not in Ontario	8	57	11	3	79
TOTALS	31,688	30,440	2,926	414	65,468

TABLE 19

TIME LOSS, AVERAGE AGE, AND AVERAGE WAGE, 1928

	TIME LOSS*						AGE	WAGE
	Temporary Disability		Permanent Disability		Death Cases		All Cases	All Cases
Class	Total Days	Average Days	Total Days	Average Days	Total Days	Average Days	Average Age (Years)	Average Weekly Wage
								$ c.
1	73,491	25.78	27,646	101.64	136	3.32	33.34	17 97
2	29,559	20.19	8,288	74.00	7	.41	34.45	23 29
3	9,269	16.46	4,983	52.45	38	19.00	33.20	19 97
4	16,766	19.89	8,004	62.05	38	9.50	36.45	19 14
5	40,798	19.77	19,715	104.87	1,769	20.10	32.68	29 87
6	15,484	22.51	8,151	99.40	410	82.00	34.88	23 23
7	7,801	22.35	2,663	60.52	....	....	36.22	29 24
8	15,905	18.10	3,723	55.57	....	....	34.05	23 41
9	24,885	18.70	10,735	67.52	15	2.14	35.09	23 17
10	26,484	16.37	10,926	49.22	53	13.25	31.17	21 72
11	29,904	17.37	11,769	55.25	857	122.43	32.94	26 39
12	15,034	21.27	4,979	80.31	10	1.11	37.17	24 06
13	7,228	22.31	3,907	111.63	0	0	36.53	24 41
14	6,025	16.07	1,768	60.97	....	....	34.61	22 20
15	25,049	19.72	12,130	98.62	25	3.13	32.70	21 13
16	12,946	18.42	5,917	69.61	0	0	32.41	22 36
17	10,174	16.90	3,427	55.28	0	0	30.78	17 39
18	6,804	15.22	1,129	75.27	....	....	28.00	19 25
19	8,184	18.73	2,487	52.92	....	....	29.48	20 10
20	24,826	24.25	7,349	118 53	0	0	35.85	22 15
21	25,212	23.56	11,209	128.84	14	.78	35.46	24 67
22	3,403	21.82	2,071	159.31	0	0	35.98	25 50
23	25,894	22.15	10,444	97.61	119	2.64	34.07	26 49
24	76,306	21.90	27,646	103.16	17	.47	35.05	25 38
Schedule 2	55,126	23.94	21,211	119.84	55	.86	38.98	25 86
Crown...	46,891	23.49	20,206	118.16	10	.35	39.05	25 92
All......	639,448	21.01	252,483	86.29	3,573	8.63	34.56	23 65

*This does not include loss of man power by permanent impairment or death.

TABLE 20

TOTAL AND AVERAGE COMPENSATION AND MEDICAL AID COSTS, 1928, SCHEDULE 1, BY CLASSES

Compensation Costs

Class	Temporary Disability Cases		Permanent Disability Cases				Death Cases						ALL CASES	
	For Temporary Disability		For Temporary Disability		For Permanent Disability		For Temporary Disability		For Death Benefits		For Funeral Expenses			
	Total	Average	Total	Average	Total	Average	Total	Average	Total	Average	Total	Average	Total	Average
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
1	206,775 05	72 53	60,572 44	222 69	148,876 33	547 34	320 41	7 81	94,651 00	2,308 56	4,961 85	121 02	516,157 08	163 13
2	98,634 84	67 37	20,942 93	186 99	56,415 00	503 71	14 58	86	26,971 00	1,586 53	2,067 95	121 64	205,046 30	128 72
3	23,782 26	42 24	13,518 89	142 30	36,260 00	381 68	78 13	39 07	9,492 00	4,746 00	250 00	125 00	83,381 28	126 34
4	48,388 75	57 40	19,212 07	148 93	59,826 00	463 77	91 82	22 96	16,879 00	4,219 75	500 00	125 00	144,897 64	148 46
5	169,806 72	82 27	57,989 19	315 16	156,690 18	851 58	720 88	8 58	249,829 84	2,974 17	10,438 00	124 26	645,474 81	276 79
6	61,487 63	89 37	21,175 57	258 24	40,742 00	496 85	1,752 07	350 41	17,089 00	3,417 80	625 00	125 00	142,871 27	184 35
7	24,408 87	69 94	9,182 05	208 68	41,937 68	953 13	0	0	12,214 00	6,107 00	250 00	125 00	87,992 60	222 77
8	53,329 91	60 67	10,226 45	152 63	25,159 62	375 52	0	0	20,389 00	6,796 33	375 00	125 00	109,479 98	115 36
9	91,314 13	68 61	26,523 02	166 81	57,703 23	362 91	50 65	7 24	23,291 00	3,327 29	875 00	125 00	199,757 03	133 44
10	70,507 85	43 58	27,135 92	122 23	90,179 00	406 21	224 35	56 09	5,534 00	1,383 50	500 00	125 00	194,081 12	105 25
11	118,776 01	68 98	34,656 35	162 71	118,209 38	554 97	2,393 91	341 99	41,435 00	5,919 29	875 00	125 00	316,345 65	162 90
12	36,776 33	52 02	13,570 35	218 88	29,251 00	471 79	30 35	3 37	53,935 00	5,992 78	1,125 00	125 00	134,688 03	173 12
13	26,530 40	81 88	9,905 41	283 01	14,894 00	425 54	0	0	12,535 00	4,178 33	375 00	125 00	64,239 81	177 46
14	15,532 36	41 42	4,548 08	156 83	28,981 00	999 34	....	....	....	....	....	....	49,061 44	121 44
15	59,844 25	47 12	31,124 00	253 04	64,142 40	521 48	61 80	7 73	50,924 00	6,365 50	1,000 00	125 00	207,096 45	147 82
16	41,140 59	58 52	15,820 13	186 12	63,381 00	745 66	0	0	7,668 00	2,556 00	375 00	125 00	128,384 72	162 31
17	33,616 04	55 84	6,928 10	111 74	36,294 00	585 39	0	0	7,752 00	7,752 00	125 00	125 00	84,715 14	127 39
18	24,401 04	54 59	2,479 15	165 28	3,844 00	256 27	....	....	....	....	....	....	30,724 19	66 50
19	23,525 39	53 83	5,869 00	124 87	13,991 00	297 68	....	....	....	....	....	....	43,385 39	89 64
20	75,611 04	73 84	17,280 82	278 72	19,912 00	321 16	0	0	27,044 00	3,004 89	1,119 91	124 43	140,967 77	128 74
21	77,946 77	72 85	30,975 51	356 04	52,198 03	599 98	45 05	2 50	66,296 00	3,683 11	2,048 99	113 83	229,510 35	195 33
22	11,063 35	70 92	5,870 87	451 61	36,317 00	279 36	0	0	52,524 75	5,836 08	1,125 00	125 00	106,900 97	600 57
23	129,117 11	110 45	30,482 31	284 88	53,563 00	500 59	640 68	14 24	148,223 00	3,293 85	5,464 30	121 43	367,490 40	278 19
24	271,283 52	77 84	82,426 83	307 56	123,415 96	460 51	51 73	1 44	120,789 00	3,355 25	4,475 00	124 31	602,442 04	159 00
All	1,793,600 21	68 61	558,415 44	216 61	1,372,182 81	533 09	6,476 41	20 43	1,065,465 59	3,361 09	38,951 00	122 87	4,835,091 46	166 50

TABLE 20—Continued

Medical Aid Costs

Class	When Medical Aid Only		In Temporary Disability Cases		In Permanent Disability Cases		In Death Cases		FOR ALL CASES	
	Total	Average	Total	Average	Total	Average	Total	Average	Total	Average
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
1	6,543 06	7 91	114,428 20	40 14	43,215 60	158 88	1,307 60	31 89	165,494 46	41 47
2	9,247 65	5 12	46,830 13	31 99	16,179 63	144 46	414 00	24 35	72,671 41	21 39
3	4,186 25	5 41	10,815 85	19 21	5,382 87	56 66	264 50	132 25	20,649 47	14 40
4	5,450 80	5 84	20,807 65	24 68	9,782 99	75 84	460 40	115 10	36,501 84	19 12
5	10,433 00	5 03	55,676 44	26 98	29,377 54	159 66	1,896 60	22 58	97,383 58	22 08
6	4,417 10	6 31	23,494 05	34 15	11,023 45	134 43	410 00	82 00	39,344 60	26 66
7	1,647 25	7 01	11,115 01	31 85	7,444 74	169 20	95 50	47 75	20,302 50	32 23
8	8,015 55	4 85	22,782 72	25 92	5,328 84	79 54	115 50	38 50	36,242 61	13 94
9	14,069 05	5 20	35,475 08	26 65	16,810 96	105 73	325 45	46 49	66,680 54	15 87
10	18,419 80	5 10	34,449 97	21 29	14,036 13	63 23	272 00	68 00	67,177 90	12 31
11	13,670 35	5 79	42,185 41	24 50	17,889 72	83 99	1,199 50	171 36	74,944 98	17 42
12	4,914 99	6 60	17,579 00	24 87	7,319 92	118 06	438 15	48 68	30,252 06	19 86
13	1,884 05	6 47	9,153 83	28 25	6,134 32	175 27	68 50	22 83	17,240 70	26 40
14	5,585 75	5 38	7,579 09	20 21	3,438 60	118 57	....	......	16,603 44	11 51
15	11,609 17	6 21	27,529 73	21 68	17,159 42	139 51	403 00	50 38	56,701 32	17 35
16	4,334 06	5 61	15,690 16	22 32	9,144 70	107 58	274 00	91 33	29,442 92	18 84
17	3,852 29	5 40	14,529 01	24 14	4,471 29	72 12	85 50	85 50	22,938 09	16 65
18	3,405 62	6 41	9,062 55	20 28	1,594 25	106 28	....	......	14,062 42	14 16
19	3,383 70	6 45	8,550 72	19 57	5,060 65	107 67	....	......	16,995 07	16 84
20	3,515 85	6 79	33,476 80	32 69	10,532 07	169 87	352 00	39 11	47,876 72	29 68
21	5,180 60	5 42	30,420 16	28 43	19,231 34	221 05	596 62	33 15	55,428 72	26 01
22	1,026 00	6 11	4,569 80	29 29	5,542 42	426 34	122 88	13 65	11,261 10	32 55
23	10,100 25	5 04	44,065 40	37 70	12,414 52	116 02	2,445 00	54 33	69,025 17	20 75
24	20,409 80	5 34	106,637 40	30 60	34,694 91	129 46	1,716 95	47 69	163,459 06	21 48
ALL	175,301 99	5 54	746,904 16	28 57	313,210 88	121 68	13,263 65	41 84	1,248,680 68	20 58

TABLE 21

ALLEGIANCE OF INJURED WORKERS, 1928

Allegiance to	Temporary Disability	Permanent Disability	Death	TOTALS
Austria	410	32	15	457
Belgium	22	2	....	24
Bulgaria	40	2	1	43
China	4	1	....	5
Czecho-Slovakia	414	38	11	463
Denmark	55	5	....	60
Esthonia	1	....	....	1
Finland	578	67	20	665
France	68	6	1	75
Germany	95	11	2	108
Great Britain	25,638	2,499	322	28,459
Greece	21	4	....	25
Holland	15	6	1	22
Italy	823	61	10	894
Japan	1	....	....	1
Jugo-Slavia	213	15	7	235
Lithuania	3	....	....	3
Norway	58	3	1	62
Persia	1	....	....	1
Poland	787	68	5	860
Portugal	1	....	....	1
Roumania	101	5	3	109
Russia	671	48	11	730
Spain	6	....	....	6
Sweden	211	27	3	241
Switzerland	9	....	....	9
Turkey	23	2	....	25
United States	171	24	1	196
TOTALS	30,440	2,926	414	33,780

TABLE 22

SEX AND MARITAL CONDITION OF INJURED WORKERS, 1928

Sex and Marital Condition	Temporary Disability	Permanent Disability	Death	TOTALS
Males—				
Married	17,805	1,807	261	19,873
Single	11,672	1,016	111	12,799
Widowed	408	49	7	464
Not specified	234	18	34	286
Totals	30,119	2,890	413	33,422
Females—				
Married	50	7	1	58
Single	234	29	....	263
Widowed	36	....	....	36
Not specified	1	....	....	1
Totals	321	36	1	358
GRAND TOTALS	30,440	2,926	414	33,780

TABLE 23

WEEK OF TERMINATION OF TEMPORARY DISABILITIES, 1928

In 14,417 cases the disability terminated in 1 to 2 weeks after the accident.
“ 5,719 “ “ “ 2 “ 3 “ “
“ 3,291 “ “ “ 3 “ 4 “ “
“ 2,011 “ “ “ 4 “ 5 “ “
“ 1,287 “ “ “ 5 “ 6 “ “
“ 894 “ “ “ 6 “ 7 “ “
“ 622 “ “ “ 7 “ 8 “ “
“ 445 “ “ “ 8 “ 9 “ “
“ 318 “ “ “ 9 “ 10 “ “
“ 222 “ “ “ 10 “ 11 “ “
“ 199 “ “ “ 11 “ 12 “ “
“ 157 “ “ “ 12 “ 13 “ “
“ 129 “ “ “ 13 “ 14 “ “
“ 100 “ “ “ 14 “ 15 “ “
“ 78 “ “ “ 15 “ 16 “ “
“ 77 “ “ “ 16 “ 17 “ “
“ 50 “ “ “ 17 “ 18 “ “
“ 50 “ “ “ 18 “ 19 “ “
“ 38 “ “ “ 19 “ 20 “ “
“ 28 “ “ “ 20 “ 21 “ “
“ 31 “ “ “ 21 “ 22 “ “
“ 37 “ “ “ 22 “ 23 “ “
“ 18 “ “ “ 23 “ 24 “ “
“ 19 “ “ “ 24 “ 25 “ “
“ 24 “ “ “ 25 “ 26 “ “
“ 11 “ “ “ 26 “ 27 “ “
“ 16 “ “ “ 27 “ 28 “ “
“ 16 “ “ “ 28 “ 29 “ “
“ 11 “ “ “ 29 “ 30 “ “
“ 13 “ “ “ 30 “ 31 “ “
“ 8 “ “ “ 31 “ 32 “ “
“ 11 “ “ “ 32 “ 33 “ “
“ 7 “ “ “ 33 “ 34 “ “
“ 4 “ “ “ 34 “ 35 “ “
“ 4 “ “ “ 35 “ 36 “ “
“ 53 “ “ “ 36 “ 52 “ “
“ 25 “ “ did not terminate in 52 “ “

30,440 TOTAL CASES.

TABLE 24

NATURE OF INJURIES, 1928

Temporary Disability Cases

Class	Bruises, Contusions and Abrasions	Cuts, Lacerations and Punctures	Fractures	Crushes	Sprains, Strains, Twistings and Wrenchings	Scalds and Burns	Eye Injuries	Herniae	Internal Injuries	Concussions (brain, spine, etc.)	Dislocations	All Other Injuries	Industrial Diseases (Schedule 3)	TOTALS
1......	830	1,069	351	179	268	26	65	12	7	4	22	18	....	2,851
2......	381	521	164	133	145	44	31	8	3	7	9	17	1	1,464
3......	65	376	36	41	18	11	10	1	....	1	2	1	1	563
4......	160	444	88	55	55	18	12	1	1	2	6	1	....	843
5......	531	831	188	155	177	54	89	5	2	6	12	11	3	2,064
6......	175	213	69	90	62	29	33	2	2	4	5	3	1	688
7......	119	71	41	27	29	46	15	....	....	1	....	....	....	349
8......	156	253	68	102	35	193	54	7	1	....	1	2	7	879
9......	327	458	172	162	61	76	60	5	2	2	3	3	....	1,331
10......	234	805	116	159	82	98	83	10	3	2	8	3	15	1,618
11......	385	790	162	112	104	69	73	9	....	3	10	4	1	1,722
12......	173	187	95	66	95	56	21	2	1	3	5	2	1	707
13......	96	110	36	20	40	2	8	7	....	2	3	....	....	324
14......	64	219	29	9	27	20	2	1	1	....	3	....	....	375
15......	308	508	120	86	98	100	25	4	1	8	9	3	....	1,270
16......	154	308	75	61	56	25	6	4	....	1	5	3	5	703
17......	125	289	41	48	43	30	19	5	....	1	....	1	....	602
18......	61	268	30	24	25	35	2	....	....	....	1	1	....	447
19......	67	219	31	77	24	12	5	....	....	1	1	....	....	437
20......	303	258	180	105	126	10	19	4	2	3	13	1	....	1,024
21......	326	326	139	86	87	44	23	5	1	2	2	14	15	1,070
22......	43	47	17	11	14	8	7	2	....	3	1	3	....	156
23......	379	336	129	99	128	28	39	7	3	8	6	6	1	1,169
24......	879	1,301	421	199	368	120	119	13	2	15	26	20	2	3,485
Sched. 2.	689	545	306	210	346	90	53	8	1	12	21	19	3	2,303
Crown..	596	469	278	184	305	64	52	18	1	11	10	8	....	1,996
ALL....	7,626	11,221	3,382	2,500	2,818	1,308	925	140	34	102	184	144	56	30,440

TABLE 24—Continued

Permanent Disability Cases

Part of Body Affected	Per Cent. Impairment of Total Earning Capacity											
	0.0– 9.9	10.0–19.9	20.0–29.9	30.0–39.9	40.0–49.9	50.0–59.9	60.0–69.9	70.0–79.9	80.0–89.9	90.0–99.9	100.	TOTALS
Foot	213	6	3	2	1	....	....	....	....	....	....	225
Leg	191	7	5	....	3	6	1	2	....	1	3	219
Head	33	1	....	....	....	1	....	....	....	....	1	36
Face	19	....	....	1	....	....	....	....	....	....	....	20
Eye	92	123	....	1	....	....	....	....	....	....	5	221
Ear	10	1	....	....	....	....	....	....	....	....	....	11
Teeth	220	....	....	....	....	....	....	....	....	....	....	220
Arm	174	4	5	7	4	4	5	2	....	....	1	206
Hand	128	16	13	19	1	1	....	1	....	....	1	180
Thumb and three fingers	......	1	....	....	....	....	....	....	....	....	....	1
Thumb and two fingers	1	2	2	....	....	....	....	....	....	....	....	5
Thumb and one finger	14	3	....	....	....	....	....	....	....	....	....	17
Thumb	244	2	....	....	....	....	....	....	....	....	....	246
One finger	938	....	1	....	....	....	....	....	....	....	....	939
Two fingers	168	1	....	1	....	....	....	....	....	....	....	170
Three fingers	46	6	....	....	....	....	....	....	....	....	....	52
Four fingers	28	4	8	....	....	1	....	....	....	....	....	41
Internal organs	6	....	....	....	....	....	....	....	....	....	....	6
Industrial diseases	6	....	....	....	....	....	....	....	....	....	....	6
All other	85	3	2	2	....	5	3	1	1	....	3	105
TOTALS	2,616	180	39	33	9	18	9	6	1	1	14	2,926

Industrial Diseases

Description of Disease	Medical Aid Only	Temporary Disability	Permanent Disability	Death	TOTALS
Lead poisoning or its sequelae	..	30	..	..	30
Anthrax poisoning or its sequelae	..	1	..	..	1
Silicosis and miners' phthisis	..	4	6	6	16
Caisson disease	37	19	..	2	58
Benzol poisoning or its sequelae	..	2	..	1	3
TOTAL	37	56	6	9	108

TABLE 25

CAUSES OF ACCIDENTS, 1928

Cause	Medical Aid Only	Temp. Dis.	Perm. Dis.	Death	TOTALS
A. Prime Movers:					
1. Motors, engines, fans, pumps, and automatic stokers	120	103	25	1	249
2. Shafting, coupling, collars, set-screws, and keys	16	35	7	....	58
3. Belts, lines, pulleys, chains, and sprockets	188	192	44	3	427
4. Gears, cogs. cams, and friction wheels	55	42	31	....	128
Totals	379	372	107	4	862
B. Working Machines:					
1. Brick-making machines	4	7	2	....	13
2. Glass-making machines	5	7	....	....	12
3. Pottery-making machines	1	2	....	....	3
4. Stone-working machines	3	8	....	....	11
5. Mining machines, n.e.s	28	26	3	....	57
6. Mine drills	196	160	13	....	369
7. Contracting machines	85	142	17	1	245
8. Metal-working machines	316	217	41	....	574
9. Abrasive wheels	2,391	234	20	....	2,645
10. Drilling and reaming machines	375	155	25	....	555
11. Lathes	436	132	20	....	588
12. Milling machines	71	45	9	....	125
13. Pneumatic tools	400	113	15	....	528
14. Presses—cutting, shaping, forming	297	341	167	....	805
15. Shearing and punching machines	72	70	17	....	159
16. Wire-working machines	17	24	11	....	53
17. Welding and heat-cutting machines	156	18	....	....	174
18. Wood-working machines, n.e.s	97	130	29	2	258
19. Planers, jointers, and edgers	122	165	70	2	359
20. Saws	498	665	190	4	1,357
21. Shapers, moulders, and headers	120	99	21	....	240
22. Pulp and paper-making machines, n.e.s	25	13	2	....	40
23. Barkers	29	21	2	....	52
24. In-running rolls	73	84	20	....	177
25. Paper products and printing machines, n.e.s	6	8	3	....	17
26. Cutting machines	27	33	5	....	65
27. Presses—printing and embossing	88	116	24	....	228
28. Stayers	26	58	7	....	91
29. Tanning machines	4	9	1	....	14
30. Leather-working machines	42	62	10	....	114
31. Rubber-working machines	43	65	22	....	130
32. Textile machines, n.e.s	20	39	9	....	68
33. Carders	14	22	3	....	39
34. Pickers	15	10	5	....	30
35. Sewers	145	132	2	....	279
36. Finishers and launderers	17	19	6	....	42
37. Knitters	33	40	3	....	76
38. Cutters	22	25	3	....	50
39. Weavers	43	51	10	....	104
40. Spinners	5	19	9	....	33
41. Food-products, laboratory, and tobacco machines, n.e.s	73	106	28	1	208
42. Baking machines	12	35	8	....	55
43. Bottling machines	53	34	2	....	89
44. Office machines	5	18	....	....	23
Totals	6,510	3,779	854	11	11,154

TABLE 25—Continued

Cause	Medical Aid Only	Temp. Dis.	Perm. Dis.	Death	TOTALS
C. Hoisting Apparatus:					
1. Elevators	49	103	12	4	168
2. Cranes	100	167	39	15	321
3. Conveyors	108	157	31	2	298
4. Mine cages	18	39	6	4	67
5. Other hoisting apparatus	186	401	76	15	678
Totals	461	867	164	40	1,532
D. Dangerous Substances:					
1. Steam escapes	51	123	3	3	180
2. Explosives	47	114	27	17	205
3. Electric currents	53	78	6	18	155
4. Conflagrations	5	5	....	39	49
5. Hot and inflammable substances and flames	813	966	31	4	1,814
6. Corrosive substances	203	125	7	....	335
7. Poisonous and deleterious substances	44	84	6	12	146
Totals	1,216	1,495	80	93	2,884
E. Stepping on or Striking Against Objects:					
1. Stepping on objects	632	679	2	....	1,313
2. Striking against objects	4,150	1,942	96	4	6,192
Totals	4,782	2,621	98	4	7,505
F. Falling Objects:					
1. From collapse of structures	7	27	5	2	41
2. From elevations	502	573	50	7	1,132
3. In mines and quarries	243	583	53	6	885
4. Other	27	298	28	16	369
Totals	779	1,481	136	31	2,427
G. Handling Objects:					
1. Heavy objects—loading, carrying, rolling, or piling	6,348	7,124	382	9	13,863
2. Sharp objects	602	408	31	1	1,042
3. Hand trucks, carts, and wheelbarrows	346	658	28	....	1,032
Totals	7,296	8,190	441	10	15,937
H. Tools	2,767	3,040	250	3	6,060
I. Runaways and Animals:					
1. Runaways	7	46	5	2	60
2. Animals	76	208	12	....	296
Totals	83	254	17	2	356

TABLE 25—Continued

Cause	Medical Aid Only	Temp. Dis.	Perm. Dis.	Death	TOTALS
J. Moving Trains, Vehicles, etc.:					
1. Train wrecks	1	66	8	8	83
2. Caught in switch or hit fixed objects	1	28	2	3	34
3. Struck by or caught between cars and engines	13	149	25	32	219
4. Other causes, cars, and engines	2	82	16	....	100
5. Mine and quarry cars	50	168	23	9	250
6. Automobiles and other power vehicles	270	656	60	12	998
7. Animal-drawn vehicles	40	266	24	2	332
8. All other vehicles	8	41	4	4	57
Totals	385	1,456	162	70	2,073
K. Falls of Persons:					
1. From elevations	104	584	66	38	792
2. From ladders	160	467	48	5	680
3. Into excavations, pits, and shafts	26	189	10	5	230
4. On level	1,146	3,004	148	5	4,303
5. Into elevator shafts	....	9	1	2	12
6. From vehicles	94	643	48	15	800
7. From collapse of support	54	356	52	6	468
8. On steps or stairways	113	241	11	2	367
9. Into tanks or vats	1	4	....	....	5
10. From tool slipping	17	87	2	.....	106
Totals	1,715	5,584	386	78	7,763
L. All Other Causes:					
1. Flying fragments	4,955	814	183	1	5,953
2. Doors, gates, windows, and covers	262	322	29	1	614
3. Inhalation of gases, fumes, etc	49	16	....	6	71
4. Immersion in water and drenchings	1	3	1	37	42
5. Exposure to elements	26	47	7	3	83
6. Violence	5	6	3	....	14
7. Cave-ins	7	89	8	20	124
8. Not elsewhere specified	10	4	....	....	14
Totals	5,315	1,301	231	68	6,915
GRAND TOTALS	31,688	30,440	2,926	414	65,468

TABLE 26

BLOOD-POISONING CASES, 1928

Ascribed to time of injury	250
Developed 1 day after injury	404
“ 2 days “ “	373
“ 3 “ “ “	281
“ 4 “ “ “	212
“ 5 “ “ “	161
“ 6 “ “ “	101
“ 7 “ “ “	85
“ 8 “ “ “	41
“ 9 “ “ “	37
“ 10 “ “ “	32
“ 11 “ “ “	17
“ 12 “ “ “	20
“ 13 “ “ “	11
“ 14 “ “ “	18
“ 15 “ “ “	9
“ 16 “ “ “	10
“ 17 “ “ “	3
“ 18 “ “ “	2
“ 19 “ “ “	4
“ 20 “ “ “	3
“ 21 “ “ “	4
“ 22 “ “ “	3
“ 24 “ “ “	1
“ 25 “ “ “	3
“ 26 “ “ “	2
“ 27 “ “ “	3
“ 28 “ “ “	1
“ 30 “ “ “	1
“ 31 “ “ “	1
“ 33 “ “ “	1
“ 34 “ “ “	1
“ 36 “ “ “	1
“ 40 “ “ “	2
“ 50 “ “ “	1
“ 51 “ “ “	1
“ 118 “ “ “	1
“ 141 “ “ “	1
Immobilized joints due to infections	24
Amputations due to infections	26
Permanent eye injuries due to infections	8
Disfigurements due to infections	1
Deaths due to infections	10
TOTAL CASES OF INFECTIONS	2,171

TABLE 27

DEATH CASES, 1928

Number of Cases

Pension Awards	221
Lump Sums	87
Burial Expenses and Medical Aid only	96
Burial Expenses only	10
TOTAL	414

Number, Relationship and Residence of Dependants

Relationship of Dependants	Resident in Ontario	Not Resident in Ontario	TOTALS
Widow	203	34	237
Child	371	73	444
Mother	44	14	58
Father	31	9	40
Other	...	..	....
TOTALS	649	130	779

APPENDIX

SUMMARY OF COMPENSATION AND MEDICAL AID AWARDED

From Commencement of Act to End of 1929

Compensation Awarded

Schedule 1 Industries	$51,711,798 02
Schedule 2 (including Crown Cases)	16,765,853 46
Total Compensation	$68,477,651 48

Medical Aid Paid

Schedule 1 Industries	$10,002,555 45
Schedule 2 (including Crown Cases) furnished by Employer	
Total Benefits Awarded by Board	$78,480,206 93

SUMMARY OF ACCIDENTS REPORTED

From Commencement of Act to End of 1929

Schedule 1 Industries	683,565
Schedule 2 (including Crown Cases)	122,845
Total Number of Accidents Reported	806,410

FINANCIAL STATEMENT FOR SCHEDULE 1 INDUSTRIES

From Commencement of Act to End of 1929

INCOME AND CREDITS		
Net assessments received		$64,409,275 96
Received under Section 8		71,122 26
Received under Section 83(4)		51,706 16
Received under Section 105		110,818 28
Received under Section 112(3)		4,053 16
Received from D.P. & N.H.		134,742 28
Interest received		1,793,921 06
Credited from Disaster Reserve		203,601 45
Credited from Pension Fund		1,027,214 62
Assessments estimated to be due on adjustment of 1929 payrolls	$1,130,258 47	
Less: Merit rating Refunds to be made	107,860 67	
		1,022,397 80
		$68,828,853 03

EXPENDITURE AND CHARGES	
Compensation paid other than pensions, compensation deferred, and under Secs. 22 and 36	$27,552,844 93
Pensions awarded	23,242,823 73
Deferred Compensation awarded	642,901 54
Paid under Section 22	996 40
Paid under Section 36	41 75
Paid under Section 8	6,117 24
Medical Aid paid	9,990,032 27
Administration Expenses paid	2,235,650 16
Paid to Safety Associations	1,073,267 55
Rehabilitation paid	17,084 11
Transferred to Disaster Reserve	353,259 80
Compensation estimated outstanding	2,716,339 59
Medical Aid estimated outstanding	562,805 16
Paid under Mine Rescue Work	5,267 07
Balance at Credit of Classes	429,421 73
	$68,828,853 03

SUMMARY OF PENSION FUND, SCHEDULE 1

From Commencement of Act to End of 1929

Pension awards	$23,186,222 28
Amount transferred from Disaster Reserve	56,601 45
Amount transferred from Silicosis Account	76,106 00
Interest added	6,265,866 19
	$29,584,795 92
Pension payments	11,205,351 59
	$18,379,444 33
Amount transferred to Current Fund	1,027,214 62
Balance December 31, 1929	$17,352,229 71

SUMMARY OF COMPENSATION DEFERRED, SCHEDULE 1

From Commencement of Act to End of 1929

Compensation deferred	$642,901 54
Interest added	78,697 22
	$721,598 76
Amounts paid on Compensation Deferred, Principal and Interest	606,457 25
Balance December 31, 1929	$115,141 51

SUMMARY OF DISASTER RESERVE, SCHEDULE 1

From Commencement of Act to End of 1929

Amount set aside	$353,259 80
Interest added	130,625 79
	$483,885 59
Transferred to classes	203,601 45
Balance December 31, 1929	$280,284 14

SUMMARY OF SILICOSIS ACCOUNT, SCHEDULE 1

From Commencement of Act to End of 1929

Assessments collected		$443,598 42
Interest added		27,496 55
		$471,094 97
Payments made:		
For Compensation	$254,788 51	
For Medical Aid	12,523 18	
For Salaries and Expenses	51,975 75	
For Salaries and Expenses of Referee Board	8,010 53	
		327,297 97
Balance December 31, 1929		$143,797 00

SUMMARY OF INVESTMENTS, SCHEDULE 1

From Commencement of Act to End of 1929

Invested	$31,838,486 35
Less principal returned	11,048,183 98
Book Value of Investments, December 31, 1929, Principal	20,790,302 37
Plus accrued interest not received or apportioned	243,907 39
Total Book Value of Investments, December 31, 1929	$21,034,209 76

SUMMARY OF SCHEDULE 2 FUNDS

From Commencement of Act to End of 1929

Received from employers		$11,609,564 70
Interest received		1,890,095 15
		$13,499,659 85
Payments made	$9,398,549 38	
Deposits returned to employers	484,786 49	
		9,883,335 87
Cash in Bank and Invested, December 31, 1929		$3,616,323 98

SUMMARY OF INVESTMENTS, SCHEDULE 2

From Commencement of Act to End of 1929

Invested	$3,910,638 55
Less principal returned	375,651 88
Book Value of Investments, December 31, 1929, Principal	$3,534,986 67
Plus accrued interest not received or apportioned	34,957 06
Total Book Value of Investments, December 31, 1929	$3,569,943 73

SUMMARY OF RECEIPTS AND PAYMENTS

From Commencement of Act to End of 1929

Schedule 1

Receipts		
Assessments, including additional assessments, added percentage, and interest for under or over estimate....	$64,951,717 85	
Less Merit Rating (Charges..$1,067,195 43 Refunds... 1,609,637 32)	—542,441 89	
		$64,409,275 96
Under Section 8		71,122 26
Under Section 83 (4)		51,706 16
Under Section 105		110,818 28
Under Section 112 (3)		4,053 16
From D.P. & N.H		134,742 28
From Silicosis		443,598 42
From Province of Ontario under Section 77, grants for administration expenses...		655,500 00
From Schedule 2 and Crown employers for share of administration expenses.....		390,087 24
Interest from investments and bank deposits		8,296,606 81
Principal returned from investments		11,048,183 98
From Dominion Bank (overdraft, December 31, 1929).		260,903 18
		$85,876,597 73

Payments	
Compensation payments other than on pensions or deferred awards or under Secs. 22 or 36	$27,552,844 93
Paid on Pensions	11,205,351 59
Paid on Deferred Awards, principal and interest	606,457 25
Under Section 22	996 40
Under former Section 36	41 75
Under Section 8	6,117 24
For Medical Aid	9,990,032 27
For Rehabilitation	17,084 11
For Administration Expenses	3,328,418 22
For Safety Associations	1,073,267 55
For Investments	31,838,486 35
For Silicosis	251,191 97
For Mine Rescue Work	5,267 07
Overpayment of Administration Expenses from Schedule 2 employers (refunded in 1926)	12
Cash in bank, Dec. 31, 1929	1,040 91
	$85,876,597 73

Schedule 2

Receipts	
From Employers for Deposits under Section 28 and for Claimants' Moneys.......	$5,304,791 98
From Employers for Deposits under Section 32.........	6,304,772 72
Interest from Investments and Bank Deposits.......	1,890,095 15
Principal returned from Investments...............	375,651 88
	$13,875,311 73

Payments	
To Claimants out of Deposits under Section 28 and Claimants' Moneys.......	$3,173,071 10
Returned to Employers out of Deposits under Section 28......................	452,888 91
Paid out of Deposits under Section 32:	
To Claimants............	6,223,044 72
Returned to Employers...	26,128 08
To Schedule 1 for Administration Expenses.......	5,769 50
Rehabilitation Paid........	2,433 56
For Investments...........	3,910,638 55
Cash in Bank, Dec. 31, 1929..	81,337 31
	$13,875,311 73

AUDITORS' CERTIFICATE

The Workmen's Compensation Board of Ontario,
Metropolitan Building, Toronto, Ontario.

Gentlemen:

We have completed a continuous audit of the books of the Board for the year ended December 31, 1929, and have obtained all the information and explanations that we have required.

In our opinion the statements of receipts and disbursements, Table 6, Schedules 1 and 2, do fully and fairly set forth the cash transactions of the Board for the calendar year 1929.

Bank balances on hand at the close of the period have been verified by communication with the Board's bankers.

The investments of the Board as shown by the books as at December 31, 1929, have also been verified by us and the debentures on hand confirmed by actual count.

Respectfully submitted,

FRED PAGE HIGGINS & CO.
Chartered Accountants.

Toronto, March 14, 1930.

TABLE 6

STATEMENT OF RECEIPTS AND PAYMENTS DURING 1929

Schedule 1

Receipts		
Cash in Banks, Jan. 1, 1929:		
Can. Bank of Commerce	$3,315 25	
Royal Bank.	2,165 81	
		$5,481 06
Net Assessments, Penalties, etc., collected:		
Gross Assessments....	7,739,528 44	
Merit Rating Charges...	9 03	
Under Sec. 8	7,858 12	
Under Sec. 83 (4)....	50,000 00	
Under Sec. 105.......	6,042 93	
Under Sec. 112 (3)...	513 37	
From D.P. & N.H......	9,194 02	
	$7,813,145 91	
Less:		
Assessments and Penalties refunded........	$68,284 57	
Merit Rating Refunds...	82,672 51	
	$150,957 08	
		7,662,188 83
Interest..................		1,028,002 10
From Schedule 2 employers and Dominion Crown for administration expenses account of prior years paid out of Schedule 1 in 1928..		44,475 87
Principal returned from investments.	$865,600 56	
Decrease in value of investments by amortization of premiums.	39,053 32	
		904,653 88
Silicosis..................		685 85
From Dominion Bank overdraft, Dec. 31, 1929......		260,903 18
		$9,906,390 77

Payments		
Overdraft—Dominion Bank, Jan. 1, 1929.............		$135,834 86
Compensations Paid other than pensions and Compensation Deferred.......		3,146,779 54
Pensions Paid.............		1,548,450 68
Deferred Compensation Paid		51,059 24
Rehabilitation Paid........		4,835 47
Medical Aid Paid..........		1,380,633 92
Silicosis Paid..............		89,983 17
Paid under Section 8.......		1,052 18
Mine Rescue Work Paid....		5,267 07
Administration Expenses....		341,083 58
Paid to Safety Associations..		127,638 98
Invested......	$3,047,784 69	
Increased value of Investments by accumulation of discounts....	24,946 48	
		3,072,731 17
Cash in Banks, Dec. 31, 1929:		
Can. Bank of Commerce...	$325 78	
Royal Bank.	715 13	
		1,040 91
		$9,906,390 77

Schedule 2

Receipts		
Cash in Imperial Bank, Jan. 1, 1929		$76,358 58
From Employers for Deposits under Section 28		259,725 08
From Employers for Claimants' Moneys		1,665 00
From Employers for Deposits under Section 32		806,114 99
Interest		191,007 56
Principal returned from investments	0 00	
Decrease in value of investments by amortization of premiums	917 92	917 92
		$1,335,789 13

Payments		
To Claimants out of Deposits under Section 28		$325,386 88
Deposits returned to Employees under Section 28		22,092 86
To Claimants out of Claimants' Moneys:		
Principal	$5,324 50	
Interest	....	5,324 50
Paid out of Deposits under Section 32:		
For Compensation	$768,066 14	
For Medical Aid	27,713 43	795,779 57
Deposits returned to Employers under Section 32		2,929 62
Rehabilitation Paid		685 75
Invested	$96,261 62	
Increase in value of investments by accumulation of discounts	5,991 02	102,252 64
Cash in Imperial Bank, Dec. 31, 1929		81,337 31
		$1,335,789 13

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SIXTIETH ANNUAL REPORT

OF THE

INSPECTOR OF PRISONS AND PUBLIC CHARITIES

UPON THE

Hospitals and Charitable Institutions

OF THE

PROVINCE OF ONTARIO

BEING FOR THE YEAR ENDING 30th SEPTEMBER

1929

PRINTED BY ORDER OF
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ONTARIO

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1930

Hospitals and Charitable Institutions

The Sixtieth Annual Report upon the Hospitals and Charitable Institutions of the Province of Ontario for the year ending September 30th, 1929, is presented herein.

The Governing Board of each Institution listed is respectfully requested to compare the annual report of their Institution with those of others of the same capacity.

An explanatory note accompanies each table showing the information that may be derived therefrom.

There are operating at the present time, in the Province of Ontario, 336 Hospitals and Charitable Institutions, classified as follows:

115 Public Hospitals.

21 Red Cross Outposts.

6 Hospitals for Incurables.

10 Public Sanatoria.

40 City Refuges.

3 District Houses of Refuge.

3 Convalescent Homes.

32 Orphanages.

31 County Houses of Refuge.

71 Private Hospitals.

2 Private Sanatoria.

2 Private Sanitaria (Nervous and Mental).

The above Institutions are subject to provincial inspection and with the exception of County Houses or Refuge and Private Institutions, are in receipt of provincial aid, pursuant to the provisions of The Hospitals and Charitable Institutions Act, c. 359, R.S.O. 1927.

During the current hospital year two new Public Hospitals and two Red Cross Outposts have been designated to receive provincial aid and are as follows:

1. Toronto East General Hospital, Toronto.
2. The Lockwood Clinic Limited, Toronto.
3. The Red Cross Outpost, Bonfield.
4. The Red Cross Outpost, Bracebridge.

All Institutions have received as far as possible, official visits of inspection during the year, and those entitled to receive provincial aid in accordance with the Statutes have shared in the grants voted by the Legislature.

RECAPITULATION GIVING CERTAIN STATISTICAL INFORMATION

General Table	General Hospitals	Red Cross Outpost Hospitals	Hospitals for Incurables	Sanatoria	Totals
Number of patients in residence on October 1st, 1928	6,814	77	621	1,829	9,341
Number of patients admitted during the year	180,934	2,665	381	2,170	186,150
Number of births during the year	21,533	353	....	2	21,888
Total number under treatment during the year	209,281	3,095	1,002	4,001	217,379
Number of patients discharged during the year	191,789	2,881	90	1,667	196,427
Number of deaths during the year	10,207	126	227	386	10,946
Number of patients remainmaining in residence on September 30th, 1929	7,285	88	685	1,948	10,006
Number of employees on pay rolls, September 30th, 1929	8,349	92	340	984	9,765
Total number of days' stay	2,904,521	29,384	239,322	690,887	3,864,114
Total maintenance expenditure	10,140,782.42	141,868.52	503,540.65	1,545,935.82	12,332,127.41
Average cost per adult patient per day	3.83	5.61	2.10	2.24	....
Adult bed capacity	10,333	162	770	2,184	13,449
Nursery costs	1,421	45	....	....	1,466
Average number of beds per 1,000 population, General, Red Cross, Incurable and Sanatoria	....	....	....	....	4.56

Provincial aid to Public Hospitals, Red Cross Outposts, Homes or Hospitals for Incurables, City and District Refuges, Orphanages, Infants' Homes and other Public Charities, is granted subject to the following conditions:

PRELIMINARY PROCEDURE

Pursuant to the provisions of The Hospitals and Charitable Institutions Act and Regulations, certain preliminary procedure is indicated before any hospital or charitable institution is designated to receive aid, and is as follows:

1. Representation must be made to the Honourable the Provincial Secretary, Parliament Buildings, Toronto, showing need for such an Institution and the population of the community to be served thereby.

2. Application should be made for Letters Patent by a formal Petition, addressed to the Honourable the Lieutenant-Governor of the Province of Ontario, pursuant to the provisions of The Ontario Companies Act.

3. The Board of Managers named in the above Letters Patent must forthwith secure the approval of the Provincial Inspector of Hospitals, before proceeding, for the purposes and objects of such institution, to purchase a site, or to erect any new hospital or other institution buildings, nurses' residence, servants' quarters, laundry, heat and power plant or any other building; or to erect any

additional building; or to reconstruct or make structural changes or alterations in any existing building. They must cause to be prepared and submitted in duplicate, for the approval of the Inspector, a block plan of the site, preliminary sketch plans, working plans and specifications of the proposed building, additions or alterations. Full particulars with reference to the above are given in the official Rules and Regulations for the government of Hospitals and Charitable Institutions of this province.

4. By-laws, Rules and Regulations of the Trustees or other governing body of any hospital or charitable institution shall not have force or effect unless and until approved by the Lieutenant-Governor-in-Council, upon report of the Inspector.

Mode of Distribution

1. To every Public Hospital, Red Cross Outpost, Home or Hospital for Incurables, designated to receive aid, a per diem rate of 60 cents is paid, the total amount of such aid to be based upon the number of days actual treatment and stay of each patient admitted to the Institution.

2. To every Refuge on the list of such Institutions designated to receive aid, 10 cents for each days' actual maintenance therein of any indigent person is paid.

3. To every Orphanage or Infants' Home on the list of such Institutions designated to receive aid, 5 cents for each days' actual maintenance therein of any orphan, neglected or abandoned child, is paid.

Exceptions

No Aid is Allowed:

1. For the days' stay of patients who pay, or for whom there is paid, for maintenance and treatment, a sum in excess of $1.75 a day.

2. For days' stay of infants born in the hospital.

3. For days' stay of patients admitted and discharged on the same day.

4. For the day of departure of any patient or person.

5. For the days' stay of wards of the Department of Indian Affairs.

6. For the days' stay of patients, the maintenance for whom the Department of Pensions and National Health is liable.

7. For the days' stay of patients, the maintenance for whom the Workmen's Compensation Board is liable.

8. For the days' stay of patients who are employees of public utilities, such as electric or steam railroads, express, steamship, telephone and telegraph companies, power plants, bridge and steel construction companies, municipal corporations and commissions, mining and other companies and employers liable under the provisions of schedules 2 and 3 of The Workmen's Compensation Act, c. 179, R.S.O. 1927.

9. For the days' stay of patients the maintenance for whom employers of labour, under the provisions of Section *23a* of The Hospitals and Charitable Institutions Act, are responsible.

10. For the days' stay of non-residents of the Province of Ontario.

11. For the days' stay of patients admitted to any Public Hospital, Red Cross Outpost, Home or Hospital for Incurables, Refuge, Orphanage or Infants' Home, which is hereafter established in any municipality in which any such Institution already exists and is in operation, unless such additional institution is established with the approval of the Lieutenant-Governor-in-Council.

LIMITATIONS

1. Provincial aid towards the maintenance of patients in the Public Hospitals and Red Cross Outposts is limited to 120 days, and if patients remain beyond that period, a per diem rate of ten cents is paid.

2. Where the receipts of any Public Hospital, Red Cross Outpost, Home or Hospital for Incurables, Refuge, Orphanage or Infants' Home, are equal to, or exceed, without reckoning any aid received under this Act, the expenditure for maintenance of patients or inmates, no aid shall be granted to such Institution unless the Lieutenant-Governor-in-Council otherwise directs.

3. The aid granted to any Hospital or Refuge under this Act, except in unorganized districts, unless the Lieutenant-Governor-in-Council otherwise directs, shall not for any year, exceed the amount of the municipal grant for its maintenance during that year. (R.S.O. 1927, c. 359, s. 4.)

PROVINCIAL AID TO SANATORIA FOR CONSUMPTIVES

Toward Establishment:

For preliminary procedure, see R.S.O. 1927. c. 357.

A grant of a sum equal to one-fifth of the value as reported by the Inspector of Hospitals, of the site, buildings, equipment, improvements and extensions, additions and alterations, not exceeding with respect, to any one Sanatorium, $4,000.00 in all. (See Section 14, Chapter 357, R.S.O. 1927.)

Toward Maintenance of Patients:

A per diem rate of seventy-five cents is paid for every patient who was prior to admission, a resident of Ontario, and who pays or for whom is paid for maintenance and treatment, a sum not exceeding $1.50 a day.

H. M. ROBBINS,
Deputy Provincial
Secretary.

A. L. MCPHERSON,
Inspector of Hospitals and
Charitable Institutions.

TABLE No. I.—Showing the bed capacity, both adult and nursery, together with the movements in each hospital separately.

GENERAL HOSPITALS

Name of Hospital	Location	Number of Adult beds	Number of Nursery cots	Number remaining under treatment Oct. 1st, 1928	Number admitted during year ending Sept. 30th, 1928	Number of births during year	Number of patients treated during year	Number of patients discharged during year	Number of deaths	Number in residence on Sept. 30th, 1929
Group 1—Bed capacity, 1 to 25										
Stevenson Memorial Hospital.	Alliston.......	21	5	10	260	57	327	296	21	10
Rosamond Memorial Hospital.	Almonte......	20	6	12	286	76	374	339	21	14
General Hospital............	Bowmanville...	20	6	12	318	87	417	387	20	10
Peel Memorial Hospital......	Brampton.....	23	7	10	293	95	398	353	26	19
Public Hospital............	Clinton.......	20	5	7	220	31	258	240	9	9
Haldimand War Memorial Hospital..................	Dunnville.....	21	7	4	297	53	354	326	15	13
Red Cross Memorial Hospital.	Durham.......	25	8	7	252	40	299	280	17	2
Royal Alexandra Hospital....	Fergus........	23	7	12	408	51	471	426	28	17
Memorial Hospital..........	Hanover......	19	.....	10	281	27	318	295	16	7
Notre Dame Hospital........	Hawkesbury...	16	1	8	276	8	292	274	8	10
St. Paul's Hospital..........	Hearst........	17	4	6	238	33	277	251	15	11
Alexandra Hospital..........	Ingersoll......	24	6	3	256	65	324	299	17	8
General Hospital............	Kincardine....	23	9	26	284	79	389	343	21	25
Memorial Hospital..........	Listowel.......	18	5	7	350	39	396	367	20	9
Rosedale Memorial Hospital..	Matheson.....	9	4	3	144	34	181	176	5	.....
General Hospital............	Mount Forest..	15	5	6	130	27	163	146	14	3
Cottage Hospital............	Niag.-on-Lake..	10	4	2	121	19	142	121	14	7
Willett Hospital.............	Paris..........	16	5	13	366	61	440	405	27	8
General Hospital............	Penetang......	14	4	6	269	40	315	293	11	11
Memorial Hospital..........	Seaforth.......	15	2	2	232	44	278	262	8	8
General Hospital............	Sioux Lookout.	22	4	4	445	50	504	480	13	11
Presbyterian Hospital........	So, Porcupine..	10	2	3	159	24	186	170	8	8
Brebeuf Hospital............	Sturgeon Falls..	13	3	3	136	15	154	136	11	7
Soldiers' Memorial Hospital...	Tillsonburg....	22	9	21	408	51	480	437	33	10
Lockwood Clinic............	Toronto.......	21	.....	3	837	......	840	819	5	16
General Hospital............	Wingham......	20	5	17	195	44	256	234	16	6
Total.............	....	477	123	222	7,461	1,150	8,833	8,155	419	259
Group 2—Bed capacity, 26 to 50										
Royal Victoria Hospital......	Barrie.........	43	10	34	779	124	937	853	60	24
Lady Minto Hospital........	Chapleau......	35	4	5	456	32	493	456	17	20
Cobalt Mines Hospital, Ltd...	Cobalt........	26	2	11	509	1	521	492	20	9
General Hospital............	Cobourg.......	34	6	14	542	59	615	571	33	11
Lady Minto Hospital........	Cochrane......	33	4	23	541	36	600	541	22	37
Alexandra Marine and General Hospital..................	Goderich......	27	8	16	294	47	357	336	12	9
Anson General Hospital......	Iroquois Falls..	28	6	7	395	38	440	425	4	11
General Hospital............	Kenora........	40	6	27	615	64	706	657	22	27
Ross Memorial Hospital......	Lindsay.......	35	8	24	800	95	919	833	60	26
Bethesda Hospital..........	London.......	50	23	9	205	170	384	352	15	17
General Hospital............	Mattawa......	38	2	26	468	14	508	486	7	15
St. Andrew's Hospital........	Midland.......	38	7	23	778	113	914	834	57	23
York County Hospital.......	Newmarket....	32	7	13	466	92	571	532	28	11
Queen Victoria Memorial Hospital..................	North Bay....	49	8	21	1,176	109	1,306	1,227	48	31
Lord Dufferin Hospital.......	Orangeville....	31	4	10	403	50	463	417	23	23
Protestant Children's Hospital	Ottawa........	24	14	19	209	......	228	191	14	23
J. R. Stone Memorial Hospital	Parry Sound...	30	5	7	431	49	487	464	13	10
St. Joseph's General Hospital.	" ...	32	10	17	409	67	493	462	21	10
Cottage Hospital............	Pembroke.....	50	6	29	841	60	930	860	38	32
Great War Memorial Hospital	Perth.........	31	6	27	645	83	755	696	26	33
C. E. Englehart Hospital.....	Petrolia.......	35	.....	23	490	60	573	509	42	22
Prince Edward Co. Hospital..	Picton........	35	6	11	362	59	432	409	11	12
General Hospital............	Port Hope.....	45	6	13	672	79	764	721	31	12
Victoria Hospital............	Renfrew.......	50	8	27	652	53	732	674	39	19
Plummer Memorial Hospital..	Sault Ste. Marie	31	6	23	497	70	590	565	14	11
Norfolk General Hospital.....	Simcoe........	33	10	21	879	169	1,069	986	54	29
Public Hospital.............	Smiths Falls....	43	7	21	803	104	928	856	41	31
St. Francis General Hospital..	" ...	36	7	22	458	46	526	478	19	29
General Hospital............	Strathroy......	44	6	21	479	68	568	503	40	25
Mt. Sinai Hospital...........	Toronto.......	30	12	10	1,103	217	1,330	1,284	27	19
Orthopedic Hospital.........	"	35	.....	17	1,077	......	1,094	1,061	10	23
General Hospital............	Walkerton.....	26	6	9	345	46	400	366	28	6
Totals.............	....	1,149	220	580	18,779	2,274	21,633	20,097	896	640

TABLE No. I.—Showing the bed capacity, both adult and nursery, together with the movements in each hospital separately.—Continued.

GENERAL HOSPITALS—Continued

Name of Hospital	Location	Number of Adult beds	Number of Nursery cots	Number remaining under treatment Oct. 1st, 1928	Number admitted during year ending Sept. 30th, 1929	Number of births during year	Number of patients treated during year	Number of patients discharged during year	Number of deaths	Number in residence on Sept. 30th, 1929
Group 3—Bed capacity, 51 to 100										
General Hospital	Belleville	100	16	62	2,393	220	2,675	2,447	151	77
General Hospital	Brockville	100	11	53	1,320	122	1,495	1,356	77	62
St. Vincent de Paul Hospital	“	72	8	31	1,155	85	1,271	1,174	55	42
Public General Hospital	Chatham	88	12	44	1,484	169	1,697	1,523	126	48
St. Joseph's Hospital	“	80	12	51	1,095	153	1,299	1,173	77	49
General and Marine Hospital	Collingwood	51	9	25	694	73	792	720	39	33
General Hospital	Cornwall	58	12	39	1,034	112	1,185	1,095	55	35
Hotel Dieu Hospital	“	86	14	92	1,769	174	2,035	1,872	93	70
General Hospital	Galt	68	10	49	1,524	176	1,749	1,628	67	54
General Hospital	Guelph	93	10	73	1,874	151	2,098	1,910	128	60
St. Joseph's Hospital	“	87	10	61	1,721	171	1,953	1,813	74	66
St. Joseph's Hospital	Kenora	53	7	25	482	75	582	541	24	17
Kitchener-Waterloo Hospital	Kitchener	64	12	60	1,723	196	1,979	1,842	75	62
General Hospital	Niagara Falls	58	10	43	1,463	161	1,667	1,519	94	54
Soldiers' Memorial Hospital	Orillia	69	13	53	1,398	202	1,653	1,548	56	49
General Hospital	Oshawa	74	20	36	2,042	313	2,391	2,282	56	53
Misericordia Maternity Hos.	Ottawa	60	10	19	208	198	425	400	17	8
S. A. Grace Hospital	“	62	38	41	721	461	1,223	1,142	32	49
General and Marine Hospital	Owen Sound	98	10	32	1,226	195	1,453	1,337	70	46
Nicholls Hospital	Peterborough	81	9	65	1,702	274	2,041	1,893	90	58
St. Joseph's Hospital	“	85	15	46	1,244	232	1,522	1,389	89	44
General Hospital	Port Arthur	57	6	30	963	85	1,078	1,018	29	31
Memorial Hospital	St. Thomas	92	18	52	1,823	206	2,081	1,913	99	69
General Hospital	Sarnia	61	12	49	1,049	224	1,322	1,206	67	49
General Hospital	Sault Ste. Marie	83	9	46	1,325	88	1,459	1,355	66	38
General Hospital	Stratford	80	20	64	1,494	247	1,805	1,666	81	58
St. Mary's Hospital	Timmins	69	6	45	875	48	968	887	45	36
St. John's Hospital	Toronto	72	.....	46	1,806	.....	1,852	1,785	22	45
S. A. Women's Hospital	“	53	41	42	1,217	690	1,949	1,843	63	43
Toronto East General Hospital	“	95	24	......	1,487	308	1,795	1,611	88	96
Wellesley Hospital	“	86	16	79	2,304	286	2,669	2,517	80	72
Women's College Hospital	“	76	30	50	1,123	525	1,698	1,614	32	52
Welland County Hospital	Welland	53	7	35	1,196	98	1,329	1,200	96	33
General Hospital	Woodstock	75	12	34	1,247	175	1,456	1,341	71	44
Totals		2,549	469	1,572	46,181	6,893	54,646	50,560	2,384	1,702
Group 4—Bed capacity, 101 to 200										
General Hospital	Brantford	162	20	130	3,145	438	3,713	3,314	253	146
McKellar General Hospital	Fort William	200	20	93	3,744	320	4,157	3,949	91	117
St. Joseph's Hospital	Hamilton	160	25	117	3,797	472	4,386	4,111	159	116
Hotel Dieu Hospital	Kingston	160	15	101	2,363	153	2,617	2,407	106	104
St. Mary's Hospital	Kitchener	116	21	44	1,876	233	2,153	2,000	86	67
St. Joseph's Hospital	London	142	18	106	3,049	364	3,519	3,264	136	119
General Hospital	Pembroke	144	10	71	1,362	68	1,501	1,391	68	42
St. Joseph's Hospital	Port Arthur	149	29	102	2,398	337	2,837	2,637	130	70
General Hospital	St. Catharines	142	33	64	2,511	281	2,856	2,611	175	70
St. Joseph's Hospital	Sudbury	127	12	72	2,634	163	2,869	2,690	90	89
St. Joseph's Hospital	Toronto	150	16	122	2,899	353	3,374	3,043	217	114
Metropolitan General Hospital	Walkerville	115	20	74	2,443	558	3,075	2,807	181	87
Hotel Dieu Hospital	Windsor	113	19	101	3,205	281	3,587	3,287	214	86
S. A. Grace Hospital	“	110	14	81	2,742	343	3,166	2,904	161	101
Totals		1,990	272	1,278	38,168	4,364	43,810	40,415	2,057	1,328
Group 5—Bed capacity, 201 and over										
General Hospital	Hamilton	523	47	394	9,814	973	1,181	10,145	651	385
General Hospital	Kingston	306	28	191	5,016	275	5,482	5,035	225	222
Victoria Hospital	London	400	36	279	5,127	393	5,799	5,236	271	292
Civic Hospital	Ottawa	540	60	351	8,532	697	9,580	8,744	343	393
General Hospital	“	244	32	163	5,140	221	5,524	5,147	176	201
General Hospital	Toronto	865	.....	771	1,281	1,769	15,356	13,697	923	736
Hospital for Sick Children	“	374	.....	261	6,332	......	6,593	5,529	717	347
St. Michael's Hospital	“	485	58	347	8,505	836	9,688	8,710	603	375
Western and Grace Hospitals	“	431	76	405	9,063	1,688	11,156	10,219	532	405
Totals		4,168	337	3,162	70,345	6,852	80,359	72,562	4,441	3,356
Grand Totals		**10,333**	**1,421**	**6,814**	**180,934**	**21,533**	**209,281**	**191,789**	**10,207**	**7,285**

TABLE No. II.—Showing collective stay in days of the patients admitted and infants born in the hospital, also the average stay in days each patient was under treatment.

GENERAL HOSPITALS—Continued

Name of Hospital	Location	No. of patients including infants during year.	Total collective days stay of adult patients treated during year.	Total collective days stay of infants born during year.	Total collective days stay of all patients during year.	Average days stay of all patients including infants.	Number of graduate and professional staff.	Number of other employees including nurses-in-training
Group 1—Bed capacity 1 to 25								
Stevenson Memorial Hospital	Alliston	327	2,551	683	3,234	10	6	5
Rosamond Memorial Hospital	Almonte	374	3,852	786	4,638	12	6	3
General Hospital	Bowmanville	417	4,139	940	5,079	12	2	14
Peel Memorial Hospital	Brampton	398	4,244	1,124	5,368	13	5	6
Public Hospital	Clinton	258	2,222	385	2,607	10	1	11
Haldimand War Memorial Hospital	Dunnville	354	3,182	611	3,793	11	5	4
Red Cross Memorial Hospital	Durham	299	4,376	400	4,776	16	2	10
Royal Alexandra Hospital	Fergus	471	5,900	510	6,410	14	2	23
Memorial Hospital	Hanover	318	2,654	333	2,987	9	2	10
Notre Dame Hospital	Hawkesbury	292	3,661	83	3,744	13	2	7
St. Paul's Hospital	Hearst	277	2,457	352	2,809	10	4	5
Alexandra Hospital	Ingersoll	324	3,150	726	3,876	12	1	10
General Hospital	Kincardine	389	4,784	783	5,567	14	2	12
Memorial Hospital	Listowel	396	3,630	410	4,040	10	3	11
Rosedale Memorial Hospital	Matheson	181	1,278	382	1,660	9	2	3
General Hospital	Mount Forest	163	2,069	341	2,410	15	3	4
Cottage Hospital	Niag.-on-Lake	142	1,294	263	1,557	11	2	3
Willett Hospital	Paris	440	4,744	689	5,433	12	5	6
General Hospital	Penetang	315	2,330	429	2,759	9	1	10
Memorial Hospital	Seaforth	278	2,211	511	2,722	10	1	9
General Hospital	Sioux Lookout	504	4,743	394	5,137	10	4	4
Presbyterian Hospital	So, Porcupine	186	1,550	206	1,756	9	3	3
Brebuef Hospital	Sturgeon Falls	154	1,786	122	1,908	12	......	1
Soldiers' Memorial Hospital	Tillsonburg	480	5,114	479	5,593	12	8	10
Lockwood Clinic	Toronto	840	3,989	....	3,989	5	9	8
General Hospital	Wingham	256	2,625	537	3,162	12	2	9
Total		8,833	84,535	12,479	97,014	11	83	201
Group 2—Bed capacity, 26 to 50								
Royal Victoria Hospital	Barrie	937	10,741	1,423	12,164	13	3	27
Lady Minto Hospital	Chapleau	493	5,858	380	6,238	13	5	4
Cobalt Mines Hospital, Ltd	Cobalt	521	4,928	....	4,928	9	3	10
General Hospital	Cobourg	615	5,126	442	5,568	9	3	19
Lady Minto Hospital	Cochrane	600	11,761	497	12,258	20	4	16
Alexandra Marine and General Hos.	Goderich	357	3,946	598	4,544	13	2	14
Anson General Hospital	Iroquois Falls	440	4,224	420	4,644	10	6	9
General Hospital	Kenora	706	9,713	617	10,330	15	4	11
Ross Memorial Hospital	Lindsay	919	9,920	939	10,859	12	4	27
Bethesda Hospital	London	384	4,468	3647	8,115	21	9	12
General Hospital	Mattawa	508	8,919	178	9,097	18	3	18
St. Andrew's Hospital	Midland	914	8,336	1,022	9,358	10	3	21
York County Hospital	Newmarket	571	5,514	1,012	6,526	11	3	14
Queen Victoria Memorial Hospital	North Bay	1,306	11,102	1,212	12,314	9	4	33
Lord Dufferin Hospital	Orangeville	463	7,183	721	7,904	17	3	24
Protestant Children's Hospital	Ottawa	228	6,583	....	6,583	29	3	13
J. R. Stone Memorial Hospital	Parry Sound	487	4,677	579	5,256	......	2	18
St. Joseph's General Hospital	"	493	6,867	951	7,818	16	4	10
Cottage Hospital	Pembroke	930	10,697	819	11,516	12	3	29
Great War Memorial Hospital	Perth	755	7,340	955	8,295	11	6	18
C. E. Englehart Hospital	Petrolia	573	7,822	567	8,389	15	4	19
Prince Edward County Hospital	Picton	432	2,992	644	3,636	8	3	15
General Hospital	Port Hope	764	6,096	983	7,079	9	3	19
Victoria Hospital	Renfrew	732	8,518	656	9,174	12	3	24
Plummer Memorial Hospital	Sault Ste. Marie	590	4,427	670	5,097	9	2	27
Norfolk General Hospital	Simcoe	1,069	8,969	1,794	10,763	10	11	9
Public Hospital	Smith's Falls	928	11,712	1,534	13,246	14	4	29
St. Francis General Hospital	"	526	6,994	515	7,509	14	10	18
General Hospital	Strathroy	568	7,848	892	8,740	15	3	27
Mt, Sinai Hospital	Toronto	1,330	6,890	1,798	8,688	6	6	16
Orthopedic Hospital	"	1,094	8,983	....	8,983	8	5	26
General Hospital	Walkerton	400	3,934	479	4,413	11	2	17
Totals		21,633	233,088	26,944	260,032	12	133	593

TABLE No. II.—Showing collective stay in days of the patients admitted and infants born in the hospital, also the average stay in days each patient was under treatment.—Continued.

GENERAL HOSPITALS—Continued

Name of Hospital	Location	No. of patients including infants during year.	Total collective days stay of adult patients treated during year.	Total collective days stay of infants born during year.	Total collective days stay of all patients during year.	Average days stay of all patients including infants.	Number of graduate and professional staff.	Number of other employees including nurses-in-training
Group 3—Bed capacity, 51 to 100								
General Hospital	Belleville	2,675	80,643	2,821	83,464	31	6	73
General Hospital	Brockville	1,495	19,501	1,429	20,930	14	4	52
St. Vincent de Paul Hospital	“	1,271	17,923	1,186	19,109	15	14	53
Public General Hospital	Chatham	1,697	24,099	1,842	25,941	15	9	60
St. Joseph's Hospital	“	1,299	14,686	2,221	16,907	13	10	60
General and Marine Hospital	Collingwood	792	12,795	843	13,638	17	4	32
General Hospital	Cornwall	1,185	12,511	1,259	13,770	12	6	38
Hotel Dieu Hospital	“	2,035	23,596	1,943	25,539	12	14	31
General Hospital	Galt	1,749	18,799	2,303	21,102	12	6	53
General Hospital	Guelph	2,098	25,366	1,674	27,040	13	12	86
St, Joseph's Hospital	“	1,953	22,367	1,854	24,221	12	11	71
St. Joseph's Hospital	Kenora	582	6,250	725	6,975	12	6	15
Kitchener-Waterloo Hospital	Kitchener	1,979	16,297	2,261	18,558	9	6	52
General Hospital	Niagara Falls	1,667	17,554	1,592	19,146	11	4	48
Soldiers' Memorial Hospital	Orillia	1,653	18,315	1,889	20,204	12	5	40
General Hospital	Oshawa	2,391	17,624	3,428	21,052	9	5	58
Misericrodia Maternity Hospital	Ottawa	425	3,306	2,897	6,203	14	2	15
S. A. Grace Hospital	“	1,223	7,546	6,083	13,629	11	7	38
General and Marine Hospital	Owen Sound	1,453	16,490	2,022	18,512	13	5	53
Nicholls Hospital	Peterborough	2,041	23,725	3,187	26,912	13	6	63
St. Joseph's Hospital	“	1,522	16,809	2,906	19,715	13	11	51
General Hospital	Port Arthur	1,078	12,891	880	13,771	13	5	34
Memorial Hospital	St, Thomas	2,081	20,282	2,129	22,411	11	11	73
General Hospital	Sarnia	1,322	15,857	1,792	17,649	13	6	43
General Hospital	Sault Ste. Marie	1,459	16,088	934	17,022	12	10	44
General Hospital	Stratford	1,805	22,961	2,982	25,943	14	9	61
St, Mary's Hospital	Timmins	968	13,320	553	13,873	14	9	46
St. John's Hospital	Toronto	1,852	15,511	....	15,511	8	8	98
S. A. Women's Hospital	“	1,949	12,891	8,629	21,520	11	14	38
Toronto East General Hospital	“	1,795	14,276	3,300	17,576	10	38	56
Wellesley Hospital	“	2,669	29,151	4,290	33,441	12	11	137
Women's College Hospital	“	1,698	14,051	6,766	20,817	12	11	58
Welland County Hospital	Welland	1,329	12,463	887	13,350	10	5	39
General Hospital	Woodstock	1,456	14,910	1,920	16,830	11	6	40
Totals		54,646	630,854	81,427	712,281	13	291	1,799
Group 4—Bed capacity, 101 to 200								
General Hospital	Brantford	3,713	47,213	8,553	55,766	15	22	127
McKellar General Hospital	Fort William	4,157	41,977	3,500	45,477	11	12	91
St. Joseph's Hospital	Hamilton	4,386	45,908	5,186	51,094	12	22	124
Hotel Dieu Hospital	Kingston	2,617	37,617	2,113	39,730	12	17	74
St. Mary's Hospital	Kitchener	2,153	21,276	2,382	23,658	11	11	62
St. Joseph's Hospital	London	3,519	42,340	5,317	47,657	13	18	127
General Hospital	Pembroke	1,501	30,888	839	31,727	21	19	54
St, Joseph's Hospital	Port Arthur	2,837	26,885	3,576	30,461	10	16	68
General Hospital	St. Catharines	2,856	28,364	2,787	31,151	11	10	110
St. Joseph's Hospital	Sudbury	2,869	30,458	1,631	32,089	11	14	79
St. Joseph's Hospital	Toronto	3,374	39,448	3,863	43,311	13	8	117
Metropolitan General Hospital	Walkerville	3,075	25,708	5,264	30,972	10	38	42
Hotel Dieu Hospital	Windsor	3,587	33,559	2,836	36,395	10	11	83
S. A. Grace Hospital	“	3,166	26,741	3,256	29,997	9	10	92
Totals		43,810	478,382	51,103	529,485	12	228	1,250
Group 5—Bed capacity, 201 and over								
General Hospital	Hamilton	11,181	145,021	11,263	156,284	14	61	461
General Hospital	Kingston	5,482	84,112	3,030	87,142	16	11	248
Victoria Hospital	London	5,799	119,166	3,930	123,096	21	51	369
Civic Hospital	Ottawa	9,580	145,767	9,783	155,550	16	46	488
General Hospital	“	5,524	73,030	2,522	75,552	14	8	193
General Hospital	Toronto	15,356	269,374	23,079	292,453	19	65	759
Hospital for Sick Children	“	6,593	121,417	....	121,417	18	32	417
St. Michael's Hospital	“	9,688	131,055	10,149	141,204	14	47	241
Western and Grace Hospitals	“	11,156	133,254	19,757	153,011	14	55	219
Totals		80,359	1,222,196	83,513	1,305,709	16	376	3,395
Grand Totals		**209,281**	**2,649,055**	**255,466**	**2,904,521**	**14**	**1,111**	**7,238**

TABLE No. III.—Showing the cost of maintaining the hospitals, also the average daily cost per patient.

GENERAL HOSPITALS—Continued

Name of Hospital	Location	Total collective days stay of adults.	Total collective days stay of infants.	Cost of dietaries.	Other maintenance costs	Total maintenance costs.	Average cost of each adult patient per day.
Group 1—Bed capacity, 1 to 25							
				$ c.	$ c.	$ c.	$ c.
Stevenson Memorial Hospital	Alliston	2,551	683	2,052 21	20,245 66	22,297 87	8.74
Rosamond Memorial Hospital	Almonte	3,852	786	2,359 31	10,923 58	13,282 89	3.45
General Hospital	Bowmanville	4,139	940	4,125 05	14,292 16	18,417 21	4.45
Peel Memorial Hospital	Brampton	4,244	1,124	3,018 62	11,157 01	14,175 63	3.34
Public Hospital	Clinton	2,222	385	2,528 68	8,234 05	10,762 73	4.84
Haldimand War Mem. Hospital	Dunnville	3,182	611	1,722 38	13,550 78	15,273 16	4.80
Red Cross Memorial Hospital	Durham	4,376	400	1,096 12	7,027 93	8,124 05	1.85
Royal Alexandra Hospital	Fergus	5,900	510	5,833 38	15,449 80	21,283 18	3.61
Memorial Hospital	Hanover	2,654	333	2,123 56	9,800 82	11,924 38	4.49
Notre Dame Hospital	Hawkesbury	3,661	83	2,042 06	11,035 30	13,077 36	3.57
St. Paul's Hospital	Hearst	2,457	352	2,058 77	8,043 67	10,102 44	4.11
Alexandra Hospital	Ingersoll	3,150	726	2,895 98	10,505 56	13,401 54	4.39
General Hospital	Kincardine	4,784	783	2,447 16	9,846 09	12,293 25	2.57
Memorial Hospital	Listowel	3,630	410	2,851 05	11,897 35	14,748 40	4 06
Rosedale Memorial Hospital	Matheson	1,278	382	1,372 53	6,915 15	8,287 68	6.48
General Hospital	Mount Forest	2,069	341	1,209 98	5,647 71	6,857 69	3.31
Cottage Hospital	Niag. on-Lake	1,294	263	1,462 43	5,366 21	6,828 64	5.28
Willett Hospital	Paris	4,744	689	3,288 22	14,842 31	18,130 53	3.82
General Hospital	Penetang	2,330	429	2,782 79	7,526 21	10,309 00	4.42
Memorial Hospital	Seaforth	2,211	511	2,633 33	5,655 97	8,289 30	3.75
General Hospital	Sioux Lookout	4,743	394	4,842 05	10,678 93	15,520 98	3.27
Presbyterian Hospital	So. Porcupine	1,550	206	2,436 52	7,657 24	10,093 76	6.51
Brebeuf Hospital	Sturgeon Falls	1,786	122	2,151 54	7,197 70	9,349 24	5.23
Soldiers' Memorial Hospital	Tillsonburg	5,114	479	4,309 31	17,869 94	22,179 25	4.34
Lockwood Clinic	Toronto	3,989	....	5,751 07	21,577 08	27,328 15	6.85
General Hospital	Wingham	2,625	537	3,249 98	8,211 71	11,461 69	4.37
Total		84,535	12,479	72,644 08	281,155 92	353,800 00	4.18
Average daily cost of each patient including infants $3,65							
Group 2—Bed capacity, 26 to 50							
Royal Victoria Hospital	Barrie	10,741	1,423	11,380 83	23,796 33	35,177 16	3 27
Lady Minto Hospital	Chapleau	5,858	380	2,866 57	11,420 43	14,287 00	2 76
Cobalt Mines Hospital, Ltd.	Cobalt	4,928	....	5,599 21	17,952 49	23,551 70	4 78
General Hospital	Cobourg	5,126	442	3,556 00	15,215 03	18,771 03	3 66
Lady Minto Hospital	Cochrane	11,761	497	5,811 72	16,001 24	21,812 96	1 85
Anson General Hospital	Iroquois Falls	4,224	420	5,310 66	37,217 78	42,528 44	10 07
General Hospital	Kenora	9,713	617	6,365 51	16,711 53	23,077 04	2 37
Ross Memorial Hospital	Lindsay	9,920	939	9,177 77	29,580 31	38,758 08	3 91
Bethesda Hospital	London	4,468	3,647	4,559 76	13,964 36	18,524 12	4 14
General Hospital	Mattawa	8,919	178	5,079 86	26,637 75	31,717 61	3 56
St. Andrew's Hospital	Midland	8,336	1,022	4,870 47	22,368 74	27,239 21	3 27
York County Hospital	Newmarket	5,514	1,012	3,579 94	17,537 92	21,117 86	3 83
Queen Victoria Memorial Hos.	North Bay	11,102	1,212	9,836 26	26,731 65	36,567 91	3 29
Lord Dufferin Hospital	Orangeville	7,183	721	4,606 70	15,854 65	20,461 35	2.85
Protestant Children's Hospital	Ottawa	6,583	....	2,426 75	18,538 66	20,965 41	3 18
J. R. Stone Memorial Hospital	Parry Sound	4,677	579	3,374 88	9,679 32	13,054 20	2 79
St. Joseph's General Hospital	"	6,867	951	3,589 40	18,215 75	21,805 15	3 17
Cottage Hospital	Pembroke	10,697	819	9,230 14	28,888 53	38,118 67	3 56
Great War Memorial Hospital	Perth	7,340	955	7,279 24	18,822 70	26,101 94	3 56
C. E. Englehart Hospital	Petrolia	7,822	567	4,924 64	25,983 31	30,907 95	3 95
Prince Edward County Hos.	Picton	2,992	644	3,067 20	12,011 01	15,078 21	5 04
General Hospital	Port Hope	6,096	983	3,649 07	17,643 36	21,292 43	3 49
Victoria Hospital	Renfrew	8,518	656	5,152 65	15,466 18	20,618 83	2 42
Plummer Memorial Hospital	Sault Ste. Marie	4,427	670	3,802 88	12,790 20	16,593 08	3 75
Norfolk General Hospital	Simcoe	8,969	1,794	7,233 62	26,258 86	33,492 48	3 73
Public Hospital	Smith's Falls	11,712	1,534	8,260 19	25,298 92	33,559 11	2 86
St. Francis General Hospital	"	6,994	515	10,935 53	31,184 61	42,120 14	6 02
General Hospital	Strathroy	7,848	892	6,750 03	18,195 06	24,945 09	3 18
Mt. Sinai Hospital	Toronto	6,890	1,798	6,413 38	23,116 12	29,529 50	4 28
Orthopedic Hospital	Toronto	8,983	....	9,502 35	27,642 81	37,145 16	4 13
General Hospital	Walkerton	3,934	479	2,823 74	10,794 57	13,618 31	3 46
Alexandra Marie & General	Goderich	3,946	598	3,260 00	8,903 00	12,163 00	3 08
Totals		233,088	26,944	184,276 95	640,423 18	824,700 13	3 54

Average daily cost of each patient including infants $3.17

TABLE No. III.—Showing the cost of maintaining the hospitals, also the average daily cost per patient.—Continued.

GENERAL HOSPITALS—Continued

Name of Hospital	Location	Total collective days stay of adults.	Total collective days stay of infants.	Cost of dietaries.	Other maintenance costs	Total maintenance costs.	Average cost of each adult patient per day.
Group 3—Bed capacity, 51 to 100				$ c.	$ c.	$ c.	$ c.
General Hospital	Belleville	80,643	2,821	28,502 25	63,724 07	92,226 32	1 14
General Hospital	Brockville	19,501	1,429	20,656 52	43,354 40	64,010 92	3 28
St. Vincent de Paul Hospital	"	17,923	1,186	21,095 97	66,549 34	87,645 31	4 89
Public General Hospital	Chatham	24,099	1,842	18,868 14	47,216 24	66,084 38	2 74
St. Joseph's Hospital	"	14,686	2,221	16,079 34	44,862 93	60,942 27	4 15
General and Marine Hospital	Collingwood	12,795	843	8,285 09	21,922 85	30,207 94	2 36
General Hospital	Cornwall	12,511	1,259	13,407 97	42,065 08	55,473 05	4 43
Hotel Dieu Hospital	"	23,596	1,943	19,902 59	75,664 58	95,567 17	4 05
General Hospital	Galt	18,799	2,303	13,947 63	45,544 97	59,492 60	3 16
General Hospital	Guelph	25,366	1,674	23,062 47	82,695 23	105,757 70	4 17
St. Joseph's Hospital	"	22,367	1,854	22,456 29	55,794 06	78,250 35	3 50
St. Joseph's Hospital	Kenora	6,250	725	7,074 88	32,479 77	39,554 65	6 33
Kitchener-Waterloo Hospital	Kitchener	16,297	2,261	14,420 03	59,106 85	73,526 88	4 51
General Hospital	Niagara Falls	17,554	1,592	18,434 15	43,570 20	62,004 35	3 53
Soldiers' Memorial Hospital	Orillia	18,315	1,889	11,759 71	35,283 00	47,042 71	2 57
General Hospital	Oshawa	17,624	3,428	14,812 35	53,951 38	68,763 73	3 90
Misericrodia Maternity Hos.	Ottawa	3,306	2,897	2,305 66	8,388 98	10,694 64	3 23
S. A. Grace Hospital	"	7,546	6,083	6,991 10	27,224 18	34,215 28	4 53
General and Marine Hospital	Owen Sound	16,490	2,022	13,056 67	34,364 58	47,421 25	2 88
Nicholls Hospital	Peterborough	23,725	3,187	22,772 10	57,526 70	80,298 80	3 38
St. Joseph's Hospital	"	16,809	2,906	12,403 78	51,283 48	63,687 26	3 79
General Hospital	Port Arthur	12,891	880	9,430 14	31,005 90	40,436 04	3 14
Memorial Hospital	St, Thomas	20,282	2,129	22,133 63	67,958 88	90,092 51	4 44
General Hospital	Sarnia	15,857	1,792	16,471 48	36,239 13	52,710 61	3 32
General Hospital	Sault Ste. Marie	16,088	934	15,025 50	42,038 88	57,064 38	3 55
General Hospital	Stratford	22,961	2,982	19,935 11	56,680 23	76,615 34	3 34
St. Mary's Hospital	Timmins	13,320	553	14,224 90	64,363 66	78,588 56	5 90
St. John's Hospital	Toronto	15,511	....	28,756 73	75,047 53	103,804 26	6 69
S. A. Women's Hospital	"	12,891	8,629	13,401 48	49,745 73	63,147 21	4 90
Toronto East General Hospital	"	14,276	3,300	16,106 31	90,104 41	106,210 72	7 44
Wellesley Hospital	"	29,151	4,290	65,991 00	152,493 70	218,484 70	7 49
Women's College Hospital	"	14,051	6,766	15,630 05	60,381 57	76,011 62	5 41
Welland County Hospital	Welland	12,463	887	12,615 56	43,780 09	56,395 65	4 52
General Hospital	Woodstock	14,910	1,920	12,617 82	44,440 26	57,058 08	3 83
Totals	....	630,854	81,427	592,634 40	1,806,852.84	2,399,487.24	3 80
Average daily cost of each patie	nt including inf	ants $3.37					
Group 4—Bed capacity, 101 to 200							
General Hospital	Brantford	47,213	8,553	36,188 86	130,060 42	166,249 28	3 52
McKellar General Hospital	Fort William	41,977	3,500	28,829 57	111,243 85	140,073 42	3 34
St. Joseph's Hospital	Hamilton	45,908	5,186	48,033 42	119,269 75	167,303 17	3 64
Hotel Dieu Hospital	Kingston	37,617	2,113	36,480 18	95,361 82	131,842 00	3 50
St. Mary's Hospital	Kitchener	21,276	2,382	16,731 64	68,026 65	84,758 29	4 18
St. Joseph's Hospital	London	42,340	5,317	44,754 74	96,457 41	141,212 15	3 33
General Hospital	Pembroke	30,888	839	22,824 41	79,864 48	102,688 89	3 32
St. Joseph's Hospital	Port Arthur	26,885	3,576	22,859 09	70,845 08	93,704 17	3 48
General Hospital	St. Catharines	28,364	2,787	34,992 99	86,828 52	121,821 51	4 29
St. Joseph's Hospital	Sudbury	30,458	1,631	20,471 04	74,491 05	94,962 09	3 12
St. Joseph's Hospital	Toronto	39,448	3,863	23,625 24	93,791 48	117,416 72	2 98
Metropolitan General Hospital	Walkerville	25,708	5,264	32,704 52	132,025 16	164,729 68	6 41
Hotel Dieu Hospital	Windsor	33,559	2,836	32,925 64	132,166 00	165,091 64	4 92
S. A. Grace Hospital	"	26,741	3,256	30,518 48	96,017 59	126,536 07	4 73
Totals	....	478,382	51,103	431,939 82	1,386,449.26	1,818,389.08	3 80
Average daily cost of each patie	nt including inf	ants $3.43					
Group 5—Bed capacity, 201 and over							
General Hospital	Hamilton	145,021	11,263	120,479 49	392,067 28	512,546 77	3 53
General Hospital	Kingston	84,112	3,030	76,922 48	160,088 88	237,011 36	2 82
Victoria Hospital	London	119,166	3,930	104,764 51	322,315 90	427,080 41	3 58
Civic Hospital	Ottawa	145,767	9,783	147,682 79	397,567 17	545,249 96	3 74
General Hospital	"	73,030	2,522	49,884 20	223,435 48	273,319 68	4 60
General Hospital	Toronto	269,374	23,079	256,002 76	882,638 71	1,138,641 47	4 23
Hospital for Sick Children	"	121,417	....	92,966 65	372,851 77	465,818 42	3 84
St. Michael's Hospital	"	131,055	10,149	122,503 92	401,208 78	523,712 70	4 00
Western and Grace Hospitals	"	133,254	19,757	144,216 14	476,809 06	621,025 20	4 66
Totals	....	1,222,196	83,513 1	,115,422.94	3,628,983.03	4,744,405.97	3 88
Average daily cost of each patie	nt including inf	ants $3.63					
Grand Totals	....	**2,649,055**	**255,466**	**2,396,918.19**	**7,743,864.23**	**10,140,782.42**	**3.83**

Average daily cost of each patient including infants $3.49

TABLE No. IV.—Showing the source of income of hospitals.

GENERAL HOSPITALS—Continued

Name of Hospital	Location	Income from patients for maintenance and treatment, miscellaneous sales, etc.	Income and grants from municipalities for patients maintenance and treatment.	Income from investments, endowments, etc.	Donations, Bequests and other gratuitous income.	Special grants for buildings, new equipment, etc.	Total income from all sources other than Gov't grant.
Group 1— Bed capacity, 1 to 25		$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Stevenson Mem. Hos....	Alliston.......	10,886 87	1,902 65	....	378 90	....	13,168 42
Rosamond Mem. Hos....	Almonte.......	8,680 71	557 00	1,071 21	2,092 66	....	12,401 58
General Hospital........	Bowmanville...	14,440 83	1,982 75	303 01	22,519 26	....	39,245 85
Peel Memorial Hospital..	Brampton.....	11,252 00	2,731 25	....	2,636 00	....	16,619 25
Public Hospital.........	Clinton.......	7,913 18	865 50	....	343 12	....	9,121 80
Haldimand War Mem. H.	Dunnville.....	10,042 65	2,102 75	....	315 42	....	12,460 82
Red Cross Mem. Hos....	Durham.......	8,078 41	1,119 50	61 41	700 10	10,000 00	19,959 42
Royal Alexandra Hospital	Fergus........	17,705 88	1,314 25	....	....	....	19,020 13
Memorial Hospital.......	Hanover......	8,742 04	2,204 25	782 25	246 90	....	11,975 44
Notre Dame Hospital....	Hawkesbury...	6,806 55	3,081 00	....	6,084 90	....	15,972 45
St. Paul's Hospital......	Hearst........	2,132 32	....	....	1,857 00	....	3,989 32
Alexandra Hospital......	Ingersoll......	10,367 00	1,800 00	661 77	829 61	....	13,658 38
General Hospital........	Kincardine....	10,793 51	2,500 00	256 39	1,995 00	....	15,544 90
Memorial Hospital......	Listowel.......	12,236 74	2,200 00	25 00	1,956 93	2,025 00	18,443 67
Rosedale Mem. Hos.....	Matheson.....	2,216 10	300 00	....	4,211 05	....	6,727 15
General Hospital........	Mount Forest..	4,445 85	705 25	40 55	179 40	....	5,371 05
Cottage Hospital........	Niag.-on-Lake..	3,437 10	2,891 50	....	2,675 55	....	9,004 15
Willett Hospital.........	Paris..........	10,941 80	2,239 66	620 35	2,745 87	500 00	17,047 68
General Hospital........	Penetang......	5,327 08	2,153 21	....	1,522 91	....	9,003 20
Memorial Hospital......	Seaforth.......	6,668 16	772 75	....	....	....	7,440 91
General Hospital........	Sioux Lookout..	17,524 75	1,150 50	....	1,440 60	1,111 75	21,227 60
Presbyterian Hospital....	So. Porcupine..	5,176 79	943 00	....	5,035 00	....	11,154 79
Brebeuf Hospital........	Sturgeon Falls	5,894 30	811 00	....	5,820 10	....	12,525 40
Soldiers' Memorial Hos..	Tillsonburg....	37,139 74	1,832 00	2,500 00	250 85	....	41,722 59
Lockwood Clinic........	Toronto.......	23,587 09	....	....	....	....	23,587 09
General Hospital........	Wingham......	8,686 64	1,831 25	....	478 50	....	10,996 39
Totals.........	....	271,124 09	39,991 02	6,321 94	66,315 63	13,636 75	397,389 43
Group 2— Bed capacity, 26 to 50							
Royal Victoria Hospital..	Barrie.........	28,479 32	6,574 25	868 18	62 44	....	35,984 19
Lady Minto Hospital....	Chapleau......	18,216 03	516 00	165 00	552 29	400 00	19,849 32
Cobalt Mines Hos., Ltd..	Cobalt........	17,869 28	3,702 75	110 00	....	....	21,682 03
General Hospital........	Cobourg.......	13,879 85	2,298 40	....	962 70	....	17,140 95
Lady Mintto Hospital...	Cochrane......	17,199 78	1,000 00	225 00	87 20	....	18,511 98
Alexandra Mar. & Gen. H.	Goderich......	10,696 00	903 00	508 00	1,160 00	....	13,267 00
Anson General Hospital..	Iroquois Falls..	22,558 28	4,420 50	....	....	....	26,978 78
General Hospital........	Kenora........	16,435 04	4,720 69	....	160 00	....	21,315 73
Ross Memorial Hospital..	Lindsay.......	31,136 15	1,700 00	2,075 00	....	....	34,911 15
Bethesda Hospital.......	London.......	12,820 72	600 00	....	509 71	....	13,930 43
General Hospital........	Mattawa......	20,358 90	100 00	....	8,691 67	....	29,150 57
St. Andrew's Hospital....	Midland.......	24,868 36	5,208 44	....	410 00	....	30,486 80
York County Hospital...	Newmarket....	15,678 47	2,600 00	....	536 31	....	18,814 78
Queen Victoria Mem. H..	North Bay....	32,293 17	5,600 00	....	35 00	....	37,928 17
Lord Dufferin Hospital...	Orangeville....	16,941 99	4,382 10	5 33	947 00	....	22,276 42
Protestant Children's Hos	Ottawa........	10,288 32	6,071 00	....	....	....	16,359 32
J. R. Stone Mem. Hos...	Parry Sound...	10,332 95	....	....	6,386 49	....	16,719 44
St. Joseph's General Hos.	" ...	11,943 04	82 25	....	8,030 75	....	20,056 04
Cottage Hospital........	Pembroke.....	34,513 70	3,000 00	919 20	21,757 67	....	60,190 57
Great War Mem. Hos....	Perth.........	23,285 96	1,116 50	505 20	2,623 69	....	27,531 35
C. E. Englehart Hospital.	Petrolia.......	24,741 97	3,500 00	3,075 00	60 00	....	31,376 97
Prince Edward Co. Hos..	Picton........	11,956 23	1,661 15	1,021 44	6,661 49	....	21,300 31
General Hospital........	Port Hope.....	15,934 75	2,404 25	1,165 06	859 37	....	20,363 43
Victoriz Hospital........	Renfrew.......	22,423 76	2,000 00	....	5 00	....	24,428 76
Plummer Mem. Hospital.	Sault Ste. Mari	12,796 65	565 10	310 00	351 20	....	14,022 95
Norfolk General Hospital	Simcoe........	29,580 33	3,481 02	1,157 66	1,539 60	....	35,758 61
Public Hospital..........	Smith's Falls...	30,564 11	2,000 00	2,283 09	3,611 66	....	38,458 86
St. Francis General Hos..	" ...	35,824 62	1,212 00	....	3,537 09	....	40.573 71
General Hospital........	Strathroy......	17,594 05	4,180 75	125 58	....	....	21,900 38
Mt. Sinai Hospital.......	Toronto.......	21,186 94	1,585 50	....	4,247 98	....	27,020 42
Orthopedic Hospital.....	"	35,201 71	2,497 35	79,231 87	5,522 57	....	122,453 50
General Hospital........	Walkerton.....	11,992 38	2,800 00	278 03	10,003 91	1,500 00	26,574 32
Totals.........	....	659,592 81	82,483 00	93,928 64	89,412 79	1,900 00	927,317 24

TABLE No. IV.—Showing the source of income of hospitals.—Continued.

GENERAL HOSPITALS—Continued

Name of Hospital	Location	Income from patients for maintenance and treatment, miscellaneous sales, etc.	Income and grants from municipalities for patients maintenance and treatment.	Income from investments, endowments, etc.	Donations, bequests and other gratuitous income.	Special grants for buildings, new equipment, etc.	Total income from all sources other than Gov't grant.
Group 3— Bed capacity, 51 to 100							
		$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
General Hospital	Belleville	91,015 68	14,487 74	554 93	2,800 00		108,858 35
General Hospital	Brockville	65,362 41	2,750 00	1,515 72	992 60		70,620 73
St. Vincent de Paul Hos.	"	45,787 84	3,630 90	63 26	34,170 00		83,652 00
Public General Hospital	Chatham	60,697 07	18,516 05				79,213 12
St. Joseph's Hospital	"	44,803 89	3,544 00		14,150 00		62,497 89
General & Marine Hos.	Collingwood	22,437 68	4,417 50	444 24	16,937 82		44,237 24
General Hospital	Cornwall	36,045 39	6,241 00	2,896 36	10,135 18		55,317 93
Hotel Dieu Hospital	"	30,098 04	16,439 50	407 50	25,121 18		72,066 22
General Hospital	Galt	49,120 41	10,002 75	100 00	177 75		59,400 91
General Hospital	Guelph	82,970 38	26,451 70	157 95	1,000 00		110,580 03
St. Joseph's Hospital	"	54,877 11	4,788 90		23,103 17	1,500 00	84,269 18
St. Joseph's Hospital	Kenora	14,370 48	2,004 00	2,226 56	9,194 45	3,000 00	30,795 49
Kitchener-Waterloo Hos.	Kitchener	62,888 16	27,266 20	719 58	222 54		91,096 48
General Hospital	Niagara Falls	61,806 82	7,349 50	1,255 98	109 00		70,521 30
Soldiers' Memorial Hos.	Orillia	50,806 83	2,848 34	146 28	1,050 00		54,851 45
General Hospital	Oshawa	78,406 75	3,814 25	140 11	3,438 38		85,799 49
Misericordia Mat. Hos.	Ottawa	53,609 93	2,903 80	45 65	20,906 28		77,465 66
S. A. Grace Hospital	"	24,038 70	1,446 55		578 61		26,063 86
General & Marine Hos.	Owen Sound	46,419 20	500 00		300 00		47,219 20
Nicholls Hospital	Peterborough	61,816 47	2,273 75	13,049 89			77,140 11
St. Joseph's Hospital	"	39,608 81	3,303 75		15,190 15		58,102 71
General Hospital	Port Arthur	34,254 20	6,990 03	700 19	2,330 36		44,274 78
Memorial Hospital	St. Thomas	72,172 70	13,000 00	1,010 44	245 69		86,428 83
General Hospital	Sarnia	46,224 59	5,800 00	2,824 22	350 00		55,198 81
General Hospital	Sault Ste. Mari	38,988 55	10,749 19		1,550 10		51,287 84
General Hospital	Stratford	66,169 38	7,025 00	86 20	947 15		74,227 73
St. Mary's Hospital	Timmins	56,780 97	2,813 00		17,254 00		76,847 97
St. John's Hospital	Toronto	78,021 03	1,438 50	426 67	3,629 69		83,515 89
S. A. Women's Hospital	"	49,540 87	1,578 50		3 25		51,122 62
Toronto East Gen. Hos.	"	63,293 83	1,622 25	310 04	43 50		65,269 62
Wellesley Hospital	"	214,405 23	127 50				214,532 73
Women's College Hos.	"	54,539 33	3,190 53	200 00	2,586 56		60,516 42
Welland County Hospital	Welland	41,362 39	6,192 10	25 60	4,766 84		52,346 93
General Hospital	Woodstock	50,092 91	5,000 00	2,259 33	4,003 23		61,355 47
Totals		1,942,834 03	230,506 78	31,566 70	217,287 48	4,500 00	2,426,694 99
Group 4— Bed capacity, 101 to 200							
General Hospital	Brantford	100,339 78	40,687 77	180 00	1,240 22		142,447 77
McKellar General Hos.	Fort William	102,165 70	28,251 87	100 00	410 00		130,927 57
St. Joseph's Hospital	Hamilton	164,265 72	5,264 50	1,085 72	35,146 66		205,762 60
Hotel Dieu Hospital	Kingston	74,668 18	10,262 50		25,000 00	25,000 00	134,930 68
St. Mary's Hospital	Kitchener	52,898 30	11,611 00		21,879 13		86,388 43
St. Joseph's Hospital	London	158,536 22	6,759 25		23,203 20		188,498 67
General Hospital	Pembroke	41,380 08	3,000 00	138 00	18,125 00		62,643 08
St. Joseph's Hospital	Port Arthur	75,226 31	4,981 90		19,583 65	2,042 85	101,834 71
General Hospital	St. Catharines	89,746 55	17,591 50	4,840 88	1,801 60		113,980 53
St. Joseph's Hospital	Sudbury	77,533 33	3,106 00		21,112 75		101,752 08
St. Joseph's Hospital	Toronto	99,242 68	22,443 57	907 51	28,300 00		150,893 76
Metropolitan Gen. Hos.	Walkerville	99,937 72	13,475 00				113,412 72
Hotel Dieu Hospital	Windsor	129,044 53	9,064 00	64 82	22,707 00		160,880 35
S. A. Grace Hospital	Windsor	108,992 46	7,311 00		47 67		116,351 13
Totals		1,373,977.56	183,809 86	7,316 93	218,556 88	27,042 85	1,810,704 08
Group 5— Bed capacity, 201 and over							
General Hospital	Hamilton	291,429 15	159,978 82				451,407 97
General Hospital	Kingston	163,302 69	77,001 60	13,355 74	3,670 19		257,330 22
Victoria Hospital	London	326,591 98	142,323 72	2,951 51	150 00	18,246 09	390,263 30
Civic Hospital	Ottawa	423,664 27	91,349 57	2,125 92			517,139 76
General Hospital	Ottawa	170,620 86	35,914 59	87,687 67	51,330 25		345,553 37
General Hospital	Toronto	898,395 68	172,461 54	70,276 55	10,221 96	4,092 96	1,155,448 69
Hospital for Sick Children	"	111,642 27	154,410 63	55,391 70	72,512 13		393,956 73
St. Michael's Hospital	"	395,877 07	96,196 83		42,521 00		534,594 90
Western and Grace Hos.	"	457,831 63	99,514 85	376 00	5,260 86		562,983 34
Totals		3,239,355 60	1,029,152 15	232,165 09	185,666 39	22,339 05	4,708,678 28
Grand Totals		7,486,884.09	1,565,942.81	371,299.30	777,239.17	69,418.65	10,270,784.02

TABLE No. V.—Showing the basis on which the Statutory aid is granted.

GENERAL HOSPITALS—Continued

Name of Hospital	Location	Collective days' stay for grant at 50c. per day.	Collective days' stay for grant at 60c. per day.	Amount of Government grant for proper hospital cases.	Collective days' stay at refuge rate (10c.)	Amount at refuge rate.	Collective days' stay at indigent rate ($2.00).	Amount at indigent rate.	Total payable as Government grant.
Group 1—Bed capacity, 1 to 25									
				$ $.		$ c.		$ c.	$ c.
Stevenson Mem. Hos.	Alliston	......	2,680	1,608 00	94	9 40	......	....	1,617 40
Rosamond Mem. Hos.	Almonte	......	2,139	1,283 40	......	....	......	....	1,283 40
General Hospital	Bowmanville	......	1,580	948 00	246	24 60	......	....	972 60
Peel Memorial Hospital	Brampton	120	3,701	2,280 60	431	43 10	......	....	2,323 70
Public Hospital	Clinton	......	67	40 20	......	....	......	....	40 20
Haldimand War Mem H.	Dunnville	......	3,134	1,880 40	......	....	......	....	1,880 40
Red Cross Mem. Hospital	Durham	......	3,693	2,215 80	647	64 70	......	....	2,280 50
Royal Alexandra Hos.	Fergus	......	1,338	802 80	351	35 10	......	....	837 90
Memorial Hospital	Hanover	......	2,840	1,704 00	......	....	......	....	1,704 00
Notre Dame Hospital	Hawkesbury	......	3,126	1,875 60	46	4 60	......	....	1,880 20
St. Paul's Hospital	Hearst	......	2,306	1,383 60	102	1,025	1,025	2,050 00	3,443 80
Alexandra Hospital	Ingersoll	......	1,083	649 80	......	....	......	....	649 80
General Hospital	Kincardine	88	660	440 00	747	74 70	......	....	514 70
Memorial Hospital	Listowel	......	2,826	1,695 60	......	....	......	....	1,695 60
Rosedale Memorial Hos.	Matheson	......	1,399	839 40	4	40	154	308 00	1,147 80
General Hospital	Mount Forest	......	1,811	1,086 60	239	23 90	......	....	1,110 50
Cottage Hospital	Niag.-on-Lake	......	1,560	936 00	21	2 10	......	....	938 10
Willett Hospital	Paris	......	4,412	2,647 20	288	28 80	......	....	2,676 00
General Hospital	Penetang	......	1,328	796 80	......	....	......	....	796 80
Memorial Hospital	Seaforth	......	2,157	1,294 20	6	60	120	240 00	1,534 80
General Hospital	Sioux Lookout	......	4,527	2,716 20	130	13 00	332	664 00	3,393 20
Presbyterian Hospital	So. Porcupine	......	1,149	689 40	......	....	......	....	689 40
Brebeuf Hospital	Sturgeon Falls	......	1,800	1,080 00	48	4 80	......	....	1,084 80
Soldiers' Memorial Hos.	Tillsonburg	20	4,909	2,955 40	264	26 40	......	....	2,981 80
Lockwood Clinic	Toronto	......	24	14 40	......	....	......	....	14 40
General Hospital	Wingham	......	212	127 20	......	....	......	....	127 20
Totals	....	228	56,461	33,990 60	3,664	366 40	1,631	3,262 00	37,619 00
Group 2—Bed capacity 26 to 50									
Royal Victoria Hospital	Barrie	......	4,403	2,641 80	600	60 00	......	....	2,701 80
Lady Minto Hospital	Chapleau	3	1,465	880 50	29	2 90	312	624 00	1,507 40
Cobalt Mines Hos., Ltd.	Cobalt	1	4,499	2,699 90	......	....	893	1,786 00	4,485 90
General Hospital	Cobourg	......	2,934	1,760 40	142	14 20	......	....	1,774 60
Lady Minto Hospital	Cochrane	......	2,042	1,225 20	965	96 50	4,218	8,436 00	9,757 70
Goderich Gen. & Marine	Goderich	......	1,314	788 40	49	4 90	......	....	793 30
Anson General Hospital	Iroquois Falls	......	4,127	2,476 20	4	40	131	262 00	2,738 60
General Hospital	Kenora	100	3,376	2,075 60	3	30	......	....	2,075 90
Ross Memorial Hospital	Lindsay	......	3,900	2,340 00	3	30	......	....	2,340 30
Bethesda Hospital	London	......	4,080	2,448 00	101	10 10	......	....	2,458 10
General Hospital	Mattawa	......	6,774	4,064 40	25	2 50	195	390 00	4,456 90
St. Andrew's Hospital	Midland	2	3,621	2,173 60	......	....	......	....	2,173 60
York County Hospital	Newmarket	......	5,302	3,181 20	409	40 90	......	....	3,222 10
Queen Victoria Mem. H.	North Bay	......	4,789	2,873 40	39	3 90	117	234 00	3,111 30
Lord Dufferin Hospital	Orangeville	240	2,471	1,602 60	586	58 60	......	....	1,661 20
Protestant Children's Hos	Ottawa	120	5,989	3,653 40	1,350	135 00	......	....	3,788 40
J. R. Stone Mem. Hos.	Parry Sound	......	2,336	1,401 60	14	1 40	435	870 00	2,273 00
St. Joseph's General Hos.	"	120	2,494	1,556 40	949	94 90	61	122 00	1,773 30
Cottage Hospital	Pembroke	38	3,862	2,336 20	330	33 00	......	....	2,369 20
Great War Mem. Hos.	Perth	13	8,281	4,975 10	513	51 30	......	....	5,026 40
C. E. Englehart Hospital	Petrolia	......	2,471	1,482 60	271	27 10	......	....	1,509 70
Prince Edward Co. Hos.	Picton	......	2,705	1,623 00	155	15 50	......	....	1,638 50
General Hospital	Port Hope	......	3,681	2,208 60	13	1 30	......	....	2,209 90
Victoria Hospital	Renfrew	......	4,279	2,567 40	143	14 30	......	....	2,581 70
Plummer Memorial Hos.	Sault Ste. Marie	120	663	457 80	956	95 60	138	276 00	829 40
Norfolk General Hospital	Simcoe	......	7,736	4,641 60	5	50	......	....	4,642 10
Public Hospital	Smith's Falls	......	4,660	2,796 00	210	221 00	......	....	3,017 00
St. Francis General Hos.	"	1	2,657	1,594 70	441	44 10	......	....	1,638 80
General Hospital	Strathroy	......	1,101	660 60	1,470	147 00	......	....	807 60
Mt. Sinai Hospital	Toronto	......	6,674	4,004 40	309	30 90	......	....	4,035 30
Orthopedic Hospital	"	......	2,222	1,333 20	1,765	176 50	......	....	1,509 70
General Hospital	Walkerton	100	1,591	1,004 60	91	9 10	......	....	1,013 70
Totals	....	858	118,499	71,528 40	13,940	1,394 00	6,500	13,000 00	85,922 40

TABLE No. V.—Showing the basis on which the Statutory aid is granted.—Continued.

GENERAL HOSPITALS—Continued

Name of Hospitals	Location	Collective days' stay for grant at 50c. per day.	Collective days' stay for grant at 60c. per day.	Amount of Government grant for proper hospital cases.	Collective days' stay at refuge rate (10c.)	Amount at refuge rate.	Collective days' stay at indigent rate ($2.00).	Amount at indigent rate.	Total payable as Government grant.
Group 3—Bed capacity, 51 to 100									
				$ c.		$ c.		$ c.	$ c.
General Hospital........	Belleville......	......	7,486	4,491 60	765	76 50	......	....	4,568 10
General Hospital........	Brockville.....	120	5,532	3,379 20	1,280	128 00	......	....	3,507 20
St. Vincent de Paul Hos..	"	315	5,864	3,675 90	1,457	145 70	......	....	3,821 60
Public General Hospital..	Chatham......	496	8,118	5,118 80	3,774	377 40	......	....	5,496 20
St. Joseph's Hospital.....	"	......	6,267	3,760 20	376	37 60	......	....	3,797 80
Gen. and Marine Hos....	Collingwood...	178	5,132	3,168 20	1,889	188 90	......	....	3,357 10
General Hospital........	Cornwall......	......	6,581	3,948 60	161	16 10	......	....	3,964 70
Hotel Dieu Hospital.....	"	38	17,332	10,418 20	880	88 00	......	....	10,506 20
General Hospital........	Galt..........	......	7,097	4,258 20	145	14 50	......	....	4,272 70
General Hospital........	Guelph........	122	9,997	6,059 20	804	80 40	16	32 00	6,171 60
St. Joseph's Hospital.....	"	247	12,609	7,688 90	1,694	169 40	......	....	7,858 30
St. Joseph's Hospital.....	Kenora........	120	3,812	2,347 20	457	45 70	126	252 00	2,644 90
Kitchener-Waterloo Hos..	Kitchener.....	......	7,063	4,237 80	631	63 10	......	....	4,300 90
General Hospital........	Niagara Falls..	......	10,115	6,069 00	71	7 10	......	....	6,076 10
Soldiers' Mem. Hospital..	Orillia.........	120	9,610	5,826 00	864	86 40	410	820 00	6,732 40
General Hospital........	Oshawa.......	......	5,749	3,449 40	....	....	......	....	3,449 40
Misericordia Mat. Hos...	Ottawa........	......	2,684	1,610 40	....	....	......	....	1,610 40
S. A. Grace Hospital.....	"	......	7,334	4,400 40	....	....	......	....	4,400 40
Gen. and Marine Hos....	Owen Sound...	35	4,996	3,015 10	1,184	118 40	......	....	3,133 50
Nicholls Hospital........	Peterborough..	120	6,743	4,105 80	1,692	169 20	......	....	4,275 00
St. Joseph's Hospital.....	"	......	10,329	6,197 40	798	79 80	......	....	6,277 20
General Hospital........	Port Arthur....	122	5,121	3,133 60	679	67 90	332	664 00	3,865 50
Memorial Hospital......	St. Thomas....	120	17,949	10,829 40	1,849	184 90	......	....	11,014 30
General Hospital........	Sarnia.........	......	4,160	2,496 00	1,657	165 70	......	....	2,661 70
General Hospital........	Sault Ste. Marie	69	10,071	6,077 10	659	65 90	243	486 00	6,629 00
General Hospital........	Stratford......	......	8,066	4,839 60	146	14 60	......	....	4,854 20
St. Mary's Hospital......	Timmins......	120	12,451	7,530 60	743	74 30	209	418 00	8,022 90
St. John's Hospital......	Toronto.......	......	5,898	3,538 80	176	17 60	127	254 00	3,810 40
S. A. Women's Hospital..	"	......	4,759	2,855 40	....	....	......	....	2,855 40
Toronto East Gen. Hos...	"	......	13,189	7,913 40	....	....	......	....	7,913 40
Wellesley Hospital.......	"	......	232	139 20	....	....	......	....	139 20
Women's College Hos....	"	......	5,237	3,142 20	....	....	......	....	3,142 20
Welland County Hospital	Welland.......	22	5,670	3,413 00	308	30 80	......	....	3,443 80
General Hospital........	Woodstock....	......	3,657	2,194 20	339	33 90	......	....	2,228 10
Totals.........	....	2,364	256,910	155,328 00	25,478	2,547 80	1,463	2,926 00	160,801 80
Group 4—Bed capacity, 101 to 200									
General Hospital........	Brantford.....	331	32,870	19,887 50	2,705	270 50	......	....	20,158 00
McKellar General Hos...	Fort William...	16	17,956	10,781 60	1,390	139 00	689	1,378 00	12,298 60
St. Joseph's Hospital.....	Hamilton......	......	15,776	9,465 60	441	44 10	......	....	9,509 70
Hotel Dieu Hospital.....	Kingston......	171	21,969	13,266 90	1,458	145 80	......	....	13,412 70
St. Mary's Hospital......	Kitchener.....	......	20,860	12,516 00	576	57 60	......	....	12,573 60
St. Joseph's Hospital.....	London.......	299	9,881	6,078 10	2,495	249 50	......	....	6,327 60
General Hospital........	Pembroke.....	240	16,633	10,099 80	1,566	156 60	......	....	10,256 40
St. Joseph's Hospital.....	Port Arthur....	3	16,619	9,972 90	421	42 10	1,463	2,926 00	12,941 00
General Hospital........	St. Catharines..	......	7,478	4,486 80	1,970	197 00	......	....	4,683 80
St. Joseph's Hospital.....	Sudbury.......	235	15,694	9,533 90	1,850	185 00	5,019	10,038 00	19,756 90
St. Joseph's Hospital.....	Toronto.......	120	38,122	22,933 20	1,252	125 20	......	....	23,058 40
Metropolitan Gen. Hos...	Walkerville....	......	24,674	14,804 40	569	56 90	......	....	14,861 30
Hotel Dieu Hospital.....	Windsor.......	......	6,618	3,970 80	598	59 80	......	....	4,030 60
S. A. Grace Hospital.....	"	120	23,917	14,410 20	1,403	140 30	......	....	14,550 50
Totals.........	....	1,535	269,067	162,207 70	18,694	1,869 40	7,171	14,342 00	178,419 10
Group 5—Bed capacity, 201 and over									
General Hospital........	Hamilton......	1,162	94,499	57,280 40	10,883	1,088 30	......	....	58,368 70
General Hospital........	Kingston......	256	26,972	16,311 20	7,169	716 90	15	30 00	17,058 10
Victoria Hospital........	London.......	1,389	39,067	24,134 70	10,455	1,045 50	......	....	25,180 20
Civic Hospital..........	Ottawa........	434	125,597	75,575 20	9,144	914 40	......	....	76,489 60
General Hospital........	Ottawa........	120	34,800	20,940 00	1,394	139 40	39	78 00	21,157 40
General Hospital........	Toronto.......	1,048	177,837	107,226 20	12,647	1,264 70	2,126	4,252 00	112,742 90
Hospital for Sick Children	"	2,128	83,793	51,339 80	18,749	1,874 90	5,576	11,152 00	64,366 70
St. Michael's Hospital....	"	......	79,503	47,701 80	2,497	249 70	259	518 00	48,469 50
Western & Grace Hos....	"	240	75,033	45,139 80	3,528	352 80	......	....	45,492 60
Totals.........	....	6,777	737,101	445,649 10	76,466	7,646 60	8,015	16,030 00	469,325 70
Grand Total, General Hos.	....	**11,762**	**1,438,038**	**868,703.80**	**138,242**	**13,824.20**	**24,780**	**49,560.00**	**932,088.00**

RED CROSS OUTPOST HOSPITALS

TABLE I

Name of Hospital	Location	Number of adult beds	Number of nursery cots.	Number remaining under treatment Oct. 1, 1928.	Number admitted during year ending Sept. 30, 1929	Number of births during year.	Number of patients treated during year.	Number of patients discharged during year.	Number of deaths	Number in residence on Sept. 30, 1929.
Red Cross Hospital	Apsley	3	2	3	18	8	29	25	2	2
Red Cross Hospital	Bancroft	7	3	5	120	32	157	143	10	4
Red Cross Hospital	Bonfield	1	1	......	3	......	3	3	......	......
Red Cross Hospital	Bracebridge	16	3	......	349	17	366	339	18	9
Red Cross Hospital	Coehill	5	2	1	63	18	82	78	4	......
Red Cross Hospital	Dryden	14	4	7	310	49	366	343	13	10
Red Cross Hospital	Englehart	10	3	5	134	19	158	146	6	6
Red Cross Hospital	Haileybury	11	2	8	181	14	203	192	6	5
Red Cross Hospital	Hornepayne	6	2	3	61	19	83	80	3	......
Red Cross Hospital	Kirkland Lake	25	5	17	673	59	749	707	27	15
Red Cross Hospital	Lions Head	4	1	......	12	8	20	19	1	......
Red Cross Hospital	Loring	2	1	3	15	6	24	24	......	......
Red Cross Hospital	Nakina	6	2	......	74	9	83	80	......	3
Lady Minto Hospital	New Liskeard	17	6	9	257	28	294	268	14	12
Red Cross Hospital	Quibell	2	......	......	7	3	10	10	......	......
Red Cross Hospital	Rainy River	8	2	4	113	24	141	122	9	10
Red Cross Hospital	Redditt	4	1	......	19	3	22	21	1	......
Red Cross Hospital	St. Joseph's Island	6	2	2	86	10	98	92	5	1
Red Cross Hospital	Thessalon	11	2	10	143	24	177	159	7	11
Red Cross Hospital	Whitney	2	1	......	20	......	20	20	......	......
Red Cross Hospital	Wilberforce	2	......	......	7	3	10	10	......	......
Totals	....	162	45	77	2,665	353	3,095	2,881	126	88

TABLE II

Name of Hospital	Location	Number of patients including infants during year.	Total collective days' stay of adult patients treated during year.	Total collective days' stay of infants born during year.	Total collective days' stay of all patients treated during year.	Average days' stay of all patients including infants	Number of graduate and professional staff.	Number of other employees including nurses-in-training.
Red Cross Hospital	Apsley	29	349	59	408	14	1	2
Red Cross Hospital	Bancroft	157	936	283	1,219	8	2	2
Red Cross Hospital	Bonfield	3	8	....	8	3	1	1
Red Cross Hospital	Bracebridge	366	2,873	264	3,137	8	4	2
Red Cross Hospital	Coehill	82	578	234	812	9	2	1
Red Cross Hospital	Dryden	366	3,064	549	3,613	10	4	4
Red Cross Hospital	Englehart	158	1,133	207	1,340	8	3	2
Red Cross Hospital	Haileybury	203	2,002	187	2,189	11	3	2
Red Cross Hospital	Hornepayne	83	595	223	818	10	2	2
Red Cross Hospital	Kirkland Lake	749	5,918	740	6,658	9	7	5
Red Cross Hospital	Lions Head	20	127	73	200	10	1	....
Red Cross Hospital	Loring	24	254	70	324	13	1	1
Red Cross Hospital	Nakina	83	446	127	573	7	2	3
Lady Minto Hospital	New Liskeard	294	2,679	340	3,019	10	4	4
Red Cross Hospital	Quibell	10	57	36	93	9	1	2
Red Cross Hospital	Rainy River	141	1,257	284	1,541	11	2	1
Red Cross Hospital	Redditt	22	182	41	223	10	1	2
Red Cross Hospital	St. Joseph's Island	98	732	135	867	9	2	2
Red Cross Hospital	Thessalon	177	1,914	227	2,141	12	4	2
Red Cross Hospital	Whitney	20	95	....	95	5	1	1
Red Cross Hospital	Wilberforce	10	71	35	106	11	1	2
Totals	....	3,095	25,270	4,114	29,384	9	49	43

RED CROSS OUTPOST HOSPITALS—Continued

TABLE III

Name of Hospital	Location	Total collective days' stay of adults.	Total collective days' stay of infants.	Total cost of dietaries	Other maintenance costs.	Total maintenance costs.	Average cost of each adult patient per day.*
				$ c.	$ c.	$ c.	$ c.
Red Cross Hospital	Apsley	349	59	602 14	2,599 28	3,201 42	9 18
Red Cross Hospital	Bancroft	936	283	885 35	4,119 94	5,005 29	5 35
Red Cross Hospital	Bonfield	8	......	505 21	3,163 86	3,669 07	458 63
Red Cross Hospital	Bracebridge	2,873	264	2,515 43	8,926 15	11,441 58	3 98
Red Cross Hospital	Coehill	578	234	838 31	3,190 41	4,028 72	6 97
Red Cross Hospital	Dryden	3,064	549	2,468 12	9,777 51	12,245 63	4 00
Red Cross Hospital	Englehart	1,133	207	1,309 32	6,464 78	7,774 10	6 86
Red Cross Hospital	Haileybury	2,002	187	2,405 47	7,781 64	10,187 11	5 09
Red Cross Hospital	Hornepayne	595	223	1,432 35	4,323 39	5,755 74	9 67
Red Cross Hospital	Kirkland Lake	5,918	740	5,865 12	17,904 98	23,770 10	4 02
Red Cross Hospital	Lions Head	127	73	402 78	2,461 96	2,864 74	22 56
Red Cross Hospital	Loring	254	70	597 39	3,148 14	3,745 53	14 75
Red Cross Hospital	Nakina	446	127	935 52	3,975 72	4,911 24	11 01
Lady Minto Hospital	New Liskeard	2,679	340	2,571 19	9,713 03	12,284 22	4 58
Red Cross Hospital	Quibell	57	36	404 35	2,631 91	3,036 26	53 27
Red Cross Hospital	Rainy River	1,257	284	828 52	4,531 29	5,359 81	4 26
Red Cross Hospital	Redditt	182	41	573 29	2,817 09	3,390 38	18 63
Red Cross Hospital	St. Joseph's Island	732	135	796 14	4,235 19	5,031 33	6 87
Red Cross Hospital	Thessalon	1,914	227	1,529 38	6,919 46	8,448 84	4 41
Red Cross Hospital	Whitney	95	......	425 14	2,638 13	3,063 27	32 24
Red Cross Hospital	Wilberforce	71	35	352 19	2,301 95	2,654 14	37 38
Total		25,270	4,114	28,242 71	113,625 81	141,868 52	5 61

Average daily cost of each patient including infants, $4.83.
*The "average cost of each patient per day" includes cost of attendance on outpatients, which entails heavy travelling expenses in outlying districts.

TABLE IV

Name of Hospital	Location	Income from patients for maintenance and treatment, miscellaneous sales, etc.	Income and grants from municipalities for patients' maintenance and treatment.	Income from investments, endowments etc.	Donations, bequests and other gratuitous income.	Total income from all sources other than Gov't Grant.
		$ c.	$ c.	$ c.	$ c.	$ c.
Red Cross Hospital	Apsley	761 55	....	....	....	761 55
Red Cross Hospital	Bancorft	2,320 90	....	....	10 00	2,330 90
Red Cross Hospital	Bonfield	337 18	....	....	10 00	347 18
Red Cross Hospital	Bracebridge	10,047 25	....	....	10,600 00	20,647 25
Red Cross Hospital	Coehill	1,472 00	....	....	....	1,472 00
Red Cross Hospital	Dryden	9,334 60	....	....	583 89	9,918 49
Red Cross Hospital	Englehart	5,102 40	....	....	....	5,102 40
Red Cross Hospital	Haileybury	7,101 01	....	....	5 00	7,106 01
Red Cross Hospital	Hornepayne	1,979 75	100 00	....	520 50	2,600 25
Red Cross Hospital	Kirkland Lake	23,914 87	....	....	....	23,914 87
Red Cross Hospital	Lions Head	404 25	....	....	....	404 25
Red Cross Hospital	Loring	1,128 53	....	....	18 00	1,146 53
Red Cross Hospital	Nakina	1,404 75	....	....	....	1,404 75
Lady Minto Hospital	New Liskeard	9,709 05	....	....	....	9,709 05
Red Cross Hospital	Quibell	217 55	....	....	....	217 55
Red Cross Hospital	Rainy River	3,943 44	....	....	....	3,943 44
Red Cross Hospital	Redditt	599 25	....	....	....	599 25
Red Cross Hospital	St. Joseph's Island	1,863 25	....	....	144 00	2,007 25
Red Cross Hospital	Thessalon	4,628 50	....	....	69 50	4,698 00
Red Cross Hospital	Whitney	380 15	....	....	....	380 15
Red Cross Hospital	Wilberforce	511 85	....	....	85 00	596 85
Totals		87,162 08	100 00	....	12,045 89	99,307 97

RED CROSS OUTPOST HOSPITALS—Continued

TABLE V

Name of Hospital	Location	Collective days' stay for grant at 50c. per day.	Collective days' stay for grant at 60c. per day.	Amount of Government grant for proper hospital cases.	Collective days' stay at refuge rate (10c.)	Amount at refuge rate	Days' stay at indigent rate ($2.00	Amount at indigent rate	Total payable as Government grant.
				$ c.		$ c.		$ c.	$ c.
Red Cross Hospital........	Apsley..........	......	349	209 40	......	......	......	....	209 40
Red Cross Hospital	Bancroft........	......	839	530 40	......	......	......	....	503 40
Red Cross Hospital........	Bonfield.........	......	4	2 40	......	......	......	....	2 40
Red Cross Hospital........	Bracebridge.....	......	2,825	1,695 00	......	......	......	....	1,695 00
Red Cross Hospital........	Coehill..........	......	629	377 40	......	......	......	....	377 40
Red Cross Hospital........	Dryden.........	3	2,792	1,676 70	......	......	560	1,120 00	2,796 70
Red Cross Hospital........	Englehart.......	......	1,189	713 40	7	70	324	648 00	1,362 10
Red Cross Hospital........	Haileybury.....	1	2,030	1,218 50	......	......	66	132 00	1,350 50
Red Cross Hospital........	Hornepayne....	......	493	295 80	......	......	......	....	295 80
Red Cross Hospital........	Kirkland Lake..	2	6,505	3,904 00	248	24 80	39	78 00	4,006 80
Red Cross Hospital	Lions Head.....	......	127	76 20	......	......	......	....	76 20
Red Cross Hospital........	Loring..........	......	265	159 00	......	......	......	....	159 00
Red Cross Hospital	Nakina..........	......	449	269 40	4	40	31	62 00	33180
Lady Minto Hospital......	New Liskeard...	......	242	145 20	......	......	295	590 00	735 20
Red Cross Hospital........	Quibell	......	58	34 80	......	......	24	48 00	82 80
Red Cross Hospital	Rainy River....	......	1,132	679 20	5	50	238	476 00	1,155 70
Red Cross Hospital........	Redditt.........	......	197	118 20	2	20	79	158 00	276 40
Red Cross Hospital........	St. Joseph's Isld.	120	633	439 80	339	33 90	......	....	473 70
Red Cross Hospital........	Thessalon.......	......	1,621	972 60	24	2 40	70	140 00	1,115 00
Red Cross Hospital	Whitney........	......	97	58 20	2	20	14	28 00	86 40
Red Cross Hospital	Wilberforce.....	......	85	51 00	......	......	......	....	51 00
Totals...........	....	126	22,561	13,599 60	631	63 10	1.740	3,480 00	17,142 70

SANATORIA FOR CONSUMPTIVES

TABLE I

Name of Sanatoria	Location	Number of adult beds.	Number remaining under treatment Oct. 1, 1928	Number admitted during year ending Sept. 30, 1929	Number of births	Total No. of patients treated during year including infants	Number of patients discharged during the year	Number of deaths	Number of patients in residence on Sept. 30, 1929
Brant Sanatorium....................	Brantford......	96	74	60	......	134	43	3	88
Muskoka Hospital for Consumptives .	Gravenhurst....	342	324	395	......	719	334	58	327
Mountain Sanatorium................	Hamilton.......	445	359	378	......	737	249	79	409
Freeport Sanatorium.................	Kitchener......	70	70	56	......	126	43	12	71
Queen Alexandra Sanatorium..........	London........	419	346	506	......	852	385	68	399
Royal Ottawa Sanatorium.............	Ottawa	149	138	153	......	291	120	35	136
St. Catharines Sanatorium............	St. Catharines...	20	19	15	......	34	9	5	20
Essex County Sanatorium.............	Sandwich.......	136	84	104	......	188	95	3	90
The Preventorium...................	Toronto........	108	71	134	......	205	142	......	63
Toronto Hospital for Consumptives....	Weston........	399	344	369	2	715	247	123	345
Totals........................	....	2,184	1,829	2,170	2	4,001	1,667	386	1,948

SANATORIA FOR CONSUMPTIVES—Continued

TABLE II

Name of Sanatoria	Location	Number of patients during year.	Total collective days' stay of adult patients during year	Total collective days' stay of infants	Total collective days' stay of adults and infants during year.	Average days' stay of adults and infants during year.	Number of graduate and professional staff.	Number of all other employees including nurses-in-training.	Total number of employees.
Brant Sanatorium	Brantford	134	27,352	....	27,352	204	10	18	28
Muskoka Hospital for Consumptives	Gravenhurst	719	118,892	....	118,892	165	29	147	176
Mountain Sanatorium	Hamilton	737	145,808	....	145,808	198	34	165	199
Freeport Sanatorium	Kitchener	126	25,988	....	25,988	206	7	26	33
Queen Alexandra Sanatorium	London	852	134,166	....	134,166	157	34	171	205
Royal Ottawa Sanatorium	Ottawa	291	48,840	....	48,840	168	26	43	69
St. Catharines Sanatorium	St. Catharines	34	7,326	....	7,326	215	2	6	8
Essex County Sanatorium	Sandwich	188	31,951	....	31,951	170	8	29	37
The Preventorium	Toronto	205	24,898	....	24,898	121	3	25	28
Toronto Hospital for Consumptives	Weston	715	125,603	63	125,666	176	24	177	201
Totals	....	4,001	690,824	63	690,887	173	177	807	984

TABLE III

Name of Sanatoria	Location	Total collective days' stay of adults.	Total collective days' stay of infants	Total cost of dietaries. $ c.	Other maintenance costs. $ c.	Total maintenance costs. $ c.	Average cost of each adult patient per day. $ c.	Average cost of adults and infants per day. $ c.
Brant Sanatorium	Brantford	27,352	....	11,370 53	30,597 94	41,968 47	1 53	.....
Muskoka Hospital for Consumptives	Gravenhurst	118,892	....	96,711 58	197,158 78	293,870 36	2 47	.....
Mountain Sanatorium	Hamilton	145,808	....	103,252 24	219,413 65	322,665 89	2 21	.....
Freeport Sanatorium	Kitchener	25,988	....	16,090 46	41,418 59	57,509 05	2 21	.....
Queen Alexandra Sanatorium	London	134,166	....	90,609 63	217,697 13	308,306 76	2 30	.....
Royal Ottawa Sanatorium	Ottawa	48,840	....	25,236 41	82,168 46	107,404 87	2 20	.....
St. Catharines Sanatorium	St. Catharines	7,326	....	4,667 38	11,354 08	16,021 46	2 19	.....
Essex County Sanatorium	Sandwich	31,951	....	18,960 13	52,029 44	70,989 57	2 22	.....
The Preventorium	Toronto	24,898	....	8,694 02	34,662 98	43,357 00	1 74	.....
Toronto Hospital for Consumptives	Weston	125,703	63	90,103 89	193,738 50	283,842 39	2 26	2 26
Totals	....	690,824	63	465,696 27	1,080,239 55	1,545,935 82	2 24	2 24

SANATORIA FOR CONSUMPTIVES—Continued

TABLE IV

Name of Sanatoria	Location	Income from Provincial Government for grants.	Income from patients for maintenance and treatment, miscellaneous sales, etc.	Income from Municipalities for patients maintenance and treatment.	Income from investments, endowments etc.	Donations, bequests and other gratuitous income.	Special grants for buildings, new equipment, etc.	Total income from all sources.
		$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Brant San.......	Brantford....	20,514 00	3,330 31	19,966 75	51 21	....	43,976 37	87,838 64
Muskoka Hos. for Consumptives.	Gravenhurst..	80,837 25	93,908 79	108,968 07	42,509 92	37,503 72	....	363,727 75
Mountain San...	Hamilton.....	109,425 00	89,125 38	158,331 80	1,674 78	42,369 57	....	400,926 53
Freeport San....	Kitchener....	19,033 50	9,257 85	38,681 75	1,662 73	1,368 04	....	70,003 87
Queen Alexandra Sanatorium...	London.......	72,843 00	146,099 05	115,210 56	34,056 15	10,162 03	....	378,370 79
Royal Ottawa Sanatorium...	Ottawa.......	36,700 50	16,713 73	55,070 64	....	....	....	108,484 87
St. Catharines Sanatorium...	St. Catharines.	5,497 50	949 50	13,127 00	1,879 70	429 02	....	21,882 72
Essex County Sanatorium...	Sandwich.....	22,152 00	19,878 35	33,485 55	79 42	633 00	....	76,228 32
The Prevent'm...	Toronto......	18,674 25	1,532 87	33,618 63	8,282 28	11,370 00	....	73,478 03
Toronto Hos. for Consumptives.	Weston.......	90,102 75	40,751 11	57,161 68	23,627 44	16,471 82	....	228,114 80
Totals......	....	475,779 75	421,546 94	633,622 43	113,823 63	120,307 20	43,976 37	1,809,056 32

HOSPITALS FOR INCURABLES

TABLE I

Name of Hospital	Location	Number of adult beds.	Number remaining under treatment Oct. 1, 1928.	Number admitted during year ending Sept. 30, 1929	Number of patients treated during the year.	Number of patients discharged during year.	Number of deaths	Number in residence on Sept. 30, 1929.
Parkwood Hospital for Incurables............	London.......	90	86	44	130	10	34	86
Perley Home for Incurables..................	Ottawa........	92	74	28	102	7	15	80
St. Vincent Home for Incurables.............	Ottawa........	128	70	82	152	23	34	95
Toronto Hospital for Incurables.............	Toronto.......	315	253	149	402	22	93	287
Home for Incurable Children.................	"	40	36	11	47	7	3	37
Mercy Home for Incurables...................	"	105	102	67	169	21	48	100
Totals......................	....	770	621	381	1,002	90	227	685

TABLE II

Name of Hospital	Location	Number of patients during year.	Total collective days' stay of patients year	Average days' stay of patients during year.	Number of graduate and professional staff.	Number of all other employees including nurses-in-training.	Total number of employees.
Parkwood Hospital for Incurables............	London...........	130	30,465	234	2	40	42
Perley Home for Incurables	Ottawa............	102	28,216	277	5	29	34
St. Vincent Home for Incurables.............	"	152	31,768	209	3	29	32
Toronto Hospital for Incurables.............	Toronto...........	402	98,883	246	19	167	186
Home for Incurable Children.................	"	47	13,331	284	2	20	22
Mercy Home for Incurables...................	"	169	36,659	217	10	14	24
Totals......................	....	1,002	239,322	239	41	299	340

HOSPITALS FOR INCURABLES—Continued

TABLE III

Name of Hospital	Location	Total collective days' stay of patients during year.	Total cost of dietaries	Other maintenance costs.	Total maintenance costs.	Average cost of each patient per day.
			$ c.	$ c.	$ c.	$ c.
Parkwood Hospital for Incurables	London	30,465	9,455 06	40,104 78	49,559 84	1 63
Perley Home for Incurables	Ottawa	28,216	9,273 95	32,690 21	41,964 16	1 49
St. Vincent Home for Incurables	"	31,768	14,382 89	44,926 69	59,309 58	1 87
Toronto Hospital for Incurables	Toronto	98,883	79,337 13	198,673 65	278,010 78	2 81
Home for Incurable Children	"	13,331	6,178 44	18,629 60	24,808 04	1 86
Mercy Home for Incurables	"	36,659	12,045 19	37,843 06	49,888 25	1 36
Totals		239,322	130,672 66	372,867 99	503,540 65	2 10

TABLE IV

Name of Hospital	Location	Income from Provincial Government for grants.	Income from patients for maintenance and treatment, miscellaneous sales, etc.	Income and grants from municipalities for patients maintenance and treatment	Income from investments, endowments, etc.	Donations, bequests and other gratuitous income.	Total income from all sources.
		$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Parkwood Hospital for Incurables	London	16,061 40	22,737 21	26,330 00	1,961 98	2,164 85	69,255 44
Perley Home for Incurables	Ottawa	15,936 60	14,413 24	10,000 00	1,250 84	3,465 26	45,065 94
St. Vincent Home for Incurables	"	18,829 20	5,419 78	34,226 14	....	2,545 08	61,020 20
Toronto Hospital for Incurables	Toronto	56,945 40	33,995 04	139,254 05	8,292 58	11,271 43	249,758 50
Home for Incurable Children	"	7,998 60	2,171 15	1,648 15	2,094 68	24,226 64	38,139 22
Mercy Home for Incurables	"	21,649 80	9,180 15	53,593 25	1,246 18	264 06	85,933 44
Totals		137,421 00	87,916 57	265,051 59	14,846 26	43,937 32	549,172 74

CITY REFUGES

TABLE I

Name of Refuge	Location	Number of beds.	Number of inmates on Sept. 30, 1928.	Number admitted during year.	Total number under lodgment during the year.	Total number discharged during the year.	Number of deaths during the year.	Number remaining in on Sept. 30, 1929
Home for Friendless	Belleville	15	13	2	15	1	1	13
The Widows' Home	Brantford	16	13	3	16	1	......	15
Home for the Friendless	Chatham	47	32	25	57	14	7	36
St. Paul's Home for the Aged	Cornwall	100	67	30	97	20	21	56
House of Providence	Dundas	162	130	45	175	26	22	127
Elliott Home	Guelph	27	28	15	43	13	5	25
House of Providence	"	53	41	30	71	27	8	36
Aged Women's Home	Hamilton	54	52	7	59	1	4	54
Home for Aged and Infirm	"	230	157	90	247	28	28	191
St. Peter's Infirmary	"	25	18	19	37	7	6	24
Home for Friendless Women and Infants	Kingston	20	19	40	59	40	1	18
House of Providence	"	160	151	89	240	52	34	154
House of Refuge	"	55	51	31	82	36	1	45
House of Providence	London	200	190	63	253	52	15	186
McCormack Home for the Aged	"	100	90	32	122	15	17	90
District of Nipissing House of Refuge	North Bay	60	46	13	59	8	10	41
Elizabeth Residence for Elderly Ladies	Ottawa	24	19	10	29	7	......	22
Monastery of Our Lady of Charity	"	250	152	97	249	87	1	161
Ottawa Home for Friendless Women	"	44	31	100	131	100	2	29
Protestant Home for the Aged	"	44	32	10	42	9	3	30
Protestant Orphans' Home, Refuge Branch	"	29	24	10	34	4	2	28
St. Charles Hospice	"	320	245	72	317	34	34	249
St. Patrick's Asylum, Refuge Branch	"	100	100	44	144	23	16	105
Women's Convalescent Home	"	18	12	141	153	145	......	8
Parry Sound District House of Refuge	Powassan	39	21	14	35	8	8	19
Peterborough Protestant Home	Peterborough	45	36	23	59	15	3	41
St. Joseph's House of Providence	"	82	75	32	107	20	7	80
Thomas Williams Home	St. Thomas	24	18	7	25	4	6	15
District of Algoma House of Refuge	Sault Ste. Marie	84	80	42	122	27	18	77
Aged Men's Home	Toronto	58	54	19	73	11	6	56
Aged Women's Home	"	115	111	24	135	13	13	109
Church Home for the Aged	"	37	36	12	48	10	5	33
Good Shepherd Female Refuge	"	185	146	80	226	76	2	148
Haven and Prison Gate Mission	"	82	88	131	219	151	......	68
Hillcrest Convalescent Home	"	43	19	152	171	139	......	32
Toronto House of Industry	"	170	138	103	241	97	21	123
House of Providence	"	466	410	312	722	271	35	416
Humewood House Association	"	20	28	74	102	71	2	29
Jewish Old Folks' Home	"	47	37	9	46	1	8	37
St. Mary's Convalescent Home	"	7	4	38	42	36	......	6
Julia Greenshields Home	"	30	30	8	38	5	3	30
Salvation Army Rescue Home	"	50	42	396	438	383	......	55
Toronto Industrial Refuge	"	90	61	49	110	35	......	75
Victor Home for Young Women	"	30	24	182	206	171	......	35
Home for the Friendless	Windsor	37	35	22	57	17	4	36
Totals		3,894	3,206	2,747	5,953	2,311	379	3,263

CITY REFUGES—Continued

TABLE II

Name of Refuge	Location	Total collective days' stay of inmates	Total cost of dietaries	Other maintenance costs.	Total maintenance cost.	Average cost of each inmate per day.
			$ c.	$ c.	$ c.	$ c.
Home for Friendless	Belleville	5,190	795 82	1,004 18	1,800 00	35
The Widows' Home	Brantford	5,602	1,284 56	1,786 07	3,070 63	55
Home for the Friendless	Chatham	7,036	2,699 73	10,555 46	13,255 19	1 88
St. Paul's Home for the Aged	Cornwall	22,577	5,167 29	8,694 12	13,861 41	61
House of Providence	Dundas	47,245	14,947 22	24,935 88	39,883 10	84
Elliott Home	Guelph	8,973	3,822 88	8,959 20	12,782 08	1 42
House of Providence	Guelph	14,965	4,315 58	10,453 01	14,768 59	99
Aged Women's Home	Hamilton	19,256	4,117 60	10,053 40	14,171 00	73
Home for Aged and Infirm	“	57,530	15,404 46	26,743 89	42,148 35	73
St. Peter's Infirmary	“	6,895	1,934 23	6,006 34	7,940 57	1 15
Home for Friendless Women and Infants	Kingston	7,358	852 53	2,366 06	3,218 59	44
House of Providence	“	58,708	27,752 86	27,522 50	55,275 36	94
House of Refuge	“	17,919	4,630 49	8,347 72	12,978 21	72
House of Providence	London	68,571	14,471 34	28,518 48	42,989 82	63
McCormack Home for the Aged	“	31,108	8,512 16	27,163 62	35,675 78	1 15
District of Nipissing House of Refuge	North Bay	16,621	3,801 34	9,867 19	13,668 53	82
Elizabeth Residence for Elderly Ladies	Ottawa	7,400	3,118 74	5,588 93	8,707 67	1 18
Monastery of Our Lady of Charity	“	55,672	8,780 78	19,202 97	27,983 75	50
Ottawa Home for Friendless Women	“	10.059	2,672 79	29,230 06	31,902 85	3 17
Protestant Home for the Aged	“	11,182	2,772 23	5,232 42	8,004 65	71
Protestant Orphans' Home, Refuge Branch	“	9,049	4,409 64	12,811 24	17,220 88	1 90
St. Charles Hospice	“	91,163	26,550 22	75,750 64	102,300 86	1 12
St. Patrick's Asylum, Refuge Branch	“	37,373	7,010 21	22,929 56	29,939 77	80
Women's Convalescent Home	“	3,539	1,710 47	4,356 31	6,066 78	1 71
Parry Sound District House of Refuge	Powassan	8,505	2,188 11	6,326 29	8,514 40	1 00
Peterborough Protestant Home	Peterborough	13,589	2,730 10	6,426 76	9,156 86	67
St. Joseph's House of Providence	“	27,984	7,001 56	9,223 85	16,225 41	58
Thomas Williams Home	St. Thomas	5,582	1,575 42	5,680 54	7,255 96	1 30
District of Algoma House of Refuge	Sault Ste. Marie	13,480	5,636 51	12,179 92	17,816 43	1 32
Aged Men's Home	Toronto	21,057	6,575 91	15,010 73	21,586 64	1 02
Aged Women's Home	“	40,350	13,382 16	24,756 90	38,139 06	94
Church Home for the Aged	“	12,896	5,179 93	12,778 26	17,958 19	1 39
Good Shepherd Female Refuge	“	53,884	16,590 57	28,972 87	45,563 44	84
Haven and Prison Gate Mission	“	26,921	8,457 98	25,894 80	34,352 78	1 28
Hillcrest Convalescent Home	“	11,289	6,520 36	10,395 46	16,915 82	1 50
Toronto House of Industry	“	46,659	132,804 97	71,339 18	204,144 15	*
House of Providence	“	73,649	39,192 61	62,808 42	102,001 03	1 38
Humewood House Association	“	9,060	2,443 30	6,751 30	9,194 60	1 01
Jewish Old Folks' Home	“	13,747	4,426 17	11,745 22	16,171 39	1 18
St. Mary's Convalescent Home	“	1,315	561 54	3,000 98	3,562 52	2 71
Julia Greenshields Home	“	10,589	4,802 62	9,216 87	14,019 49	1 32
Salvation Army Rescue Home	“	17,157	2,651 31	8,500 85	11,152 16	65
Toronto Industrial Refuge	“	23,673	8,150 34	29,291 48	37,441 82	1 58
Victor Home for Young Women	“	16,052	1,683 11	4,455 29	6,138 40	38
Home for the Friendless	Windsor	12,535	3,349 80	3,718 51	7,068 31	56
Totals		**1,080,964**	**442,809.06**	**748,206.01**	**1,191,015.07**	**1 10**

* Not available on account of expense for outdoor relief.

TABLE III

Name of Refuge	Location	Income from Provincial Government for grant.	Income from patients for maintenance, miscellaneous sales, etc.	Income from municipalities for patients maintenance and treatment.	Income from investments, endowments etc.	Income from donations, bequests and other gratuitous income.	Special grants for buildings, new equipment, etc.	Total income from all sources.
		$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Home for Friendless	Belleville	518 70		1,800 00				2,318 70
The Widows' Home	Brantford	560 20	944 00		1,613 62	2,669 88		5,787 70
Home for the Friendless	Chatham	1,400 40	102 28	11,200 00	1,543 00	5 00		14,250 68
St. Paul's Home for the Aged	Cornwall	2,219 30	3,216 47			8,198 03		13,633 80
House of Providence	Dundas	4,724 20	15,297 00	2,250 00	923 38	15,781 62		38,976 20
Elliott Home	Guelph	883 00	10,816 15		1,103 80	249 05		12,952 00
House of Providence	"	1,597 90	3,835 87	4,206 50		5,454 79		15,095 06
Aged Women's Home	Hamilton	1,926 70	300 00	6,866 02	4,632 83	521 89		14,247 44
Home for Aged and Infirm	"	5,807 70	1,723 00	31,812 85				39,343 55
St. Peter's Infirmary	"	668 50	5,979 93	402 16	1,455 98	73 00		8,579 57
Home for Friendless Women and Infants	Kingston	391 35	1,937 19	1,223 25	127 54			3,679 33
House of Providence	"	5,859 70	16,968 51	6,454 99	1,196 00	37,677 37		68,156 57
House of Refuge	"	1,792 40	1,844 86	7,037 53	1,423 75	470 69		12,569 23
House of Providence	London	6,857 10	12,034 00	8,500 00		17,833 30		45,224 40
*London Convalescent Home	"	80 00						80 00
McCormack Home for the Aged	"	3,112 30	6,208 39	26,495 75	1,423 45	3,234 02		40,473 91
District of Nipissing House of Refuge	North Bay	1,648 00	1,203 17	11,878 25	27 56			14,756 98
Elizabeth Residence for Elderly Ladies	Ottawa	738 80	8,532 95		93 53	71 00		9,436 28
Monastery of Our Lady of Charity	"	5,041 60	10,235 68	435 43		11,195 12		26,907 83
Ottawa Home for Friendless Women	"	904 90	32,484 67		473 94	134 75		33,998 26
Protestant Home for the Aged	"	1,126 00	2,591 60	1,417 10	427 50	1,998 01	21,157 08	28,717 29
Protestant Orphans' Home, Refuge Branch	"	935 60	3,686 67	1,460 30	2,113 66	60,710 64		68,906 87
St. Charles Hospice	"	9,098 60	55,332 27	15,819 65		26,711 04		106,961 56
St. Patrick's Asylum, Refuge Branch	"	3,299 40	8,549 23	3,612 60	783 40	24,560 01		40,804 64
Women's Convalescent Home	"	357 40	2,488 85	268 80				3,115 05
Parry Sound District House of Refuge	Powassan	847 60	275 00	7,356 22	82 80			8,561 62
Peterborough Protestant Home	Peterborough	1,378 20	3,689 00	3,885 00	1,636 54	504 00		11,092 74
St. Joseph's House of Providence	"	2,812 30	6,883 21	454 34		6,005 25		16,155 10
Thomas Williams Home	St. Thomas	575 50	681 90		4,243 82	4,224 28		9,725 50
District of Algoma House of Refuge	Sault Ste. Marie	2,789 70	1,642 93	15,730 20				20,162 83
Aged Men's Home	Toronto	2,094 30	12,568 00	1,696 32	1,640 05	11,732 33		29,731 00
Aged Women's Home	"	4,035 00	28,942 83	2,354 17	1,151 17	6,905 91		43,389 08
Church Home for the Aged	"	1,271 50	11,142 51	512 00	746 00	3,567 96		17,239 97
Good Shepherd Female Refuge	"	5,276 20	28,879 08	200 00		11,143 41		45,498 69
Haven and Prison Gate Mission	"	2,421 90	11,637 29	4,304 10	532 11	14,558 00		33,453 40
Hillcrest Convalescent Home	"	889 60	14,239 49	1,273 50	10 35		1,000 00	17,412 94
Toronto House of Industry	"	4,672 70	3,592 34	205,877 22	2,857 03	294 00		217,293 29
House of Providence	"	14,983 60	36,071 44	23,833 33	1,988 84	28,572 67		105,449 88
Humewood House Association	"	700 50	891 80			7,890 52		9,482 82
Jewish Old Folks' Home	"	1,392 60			3,533 31	16,818 30		21,744 21
St. Mary's Convalescent Home	"	131 90	2,089 52		40 00	500 00		2,761 42
Julia Greenshields Home	"	1,050 50	6,770 02		953 47	5,151 87		13,925 86
Salvation Army Rescue Home	"	1,254 05	4,489 77	1,414 75	2,466 10			9,624 67
Toronto Industrial Refuge	"	2,356 10	26,811 58					29,167 68
Victor Home for Young Women	"	1,325 90	292 50	573 55		4,129 50		6,321 45
Home for the Friendless	Windsor	1,228 70	482 45	4,800 00		4 41		6,515 56
Totals		115,038.10	408,385.40	417,405.88	41 144.53	339,551.62	22,157.08	1,343,682.61

*Closed during the year.

ORPHANAGES

TABLE I

Name of Orphanage	Location	Number of beds.	Number of inmates on Sept. 30, 1928.	Number admitted during the year.	Total number maintained during the year.	Total number discharged during the year.	Number of deaths during the year.	Number remaining in residence on Sept. 30, 1929.
St. Joseph's Orphanage	Cobourg	35	28	12	40	10	......	30
Nazareth Orphanage	Cornwall	60	47	41	88	42	......	46
St. Joseph's Orphanage	Fort William	139	107	55	162	62	2	98
Boys' Home	Hamilton	70	40	27	67	23	......	44
Girls' Home	“	64	42	38	80	45	......	35
Home for Friendless and Infants' Home	“	120	82	140	222	132	7	83
St. Mary's Orphan Asylum	“	160	113	67	180	59	......	121
Salvation Army Rescue Home	“	40	30	99	129	106	1	22
Orphans' Home and Widows' Friend Society	Kingston	20	10	63	73	50	......	23
St. Mary's of the Lake Orphanage	“	125	88	47	135	44	......	91
Kitchener Orphanage	Kitchener	32	31	19	50	18	1	31
Protestant Orphans' Home	London	55	44	49	93	37	......	56
Roman Catholic Orphans' Home	“	170	190	88	278	87	1	190
Ronald Gray Memorial Home	“	40	30	22	52	21	1	30
Salvation Army Rescue Home and Children's Shelter	“	40	47	98	145	94	1	50
Misericordia Refuge and Orphans' Home	Ottawa	175	146	462	608	408	64	136
Protestant Orphans' Home	“	41	29	48	77	36	......	41
Ottawa Protestant Infants' Home	“	51	40	62	102	62	......	40
St. Joseph's Orphanage	“	265	241	113	354	100	1	253
St. Patrick's Orphan Asylum	“	75	48	42	90	34	......	56
Salvation Army Rescue Home and Children's Shelter	“	103	66	232	298	212	2	84
St. Vincent Orphanage	Peterborough	38	35	15	50	30	......	20
Loyal True Blue Orphanage	Richmond Hill	200	127	39	166	39	......	127
St. Agatha Orphanage	St. Agatha	76	65	28	93	19	......	74
Protestant Orphans' Home	St. Catharines	36	34	21	55	27	......	28
Boys Home	Toronto	66	45	36	81	33	......	48
Infants' Home and Infirmary	“	......	267	519	786	501	3	282
Protestant Children's Home	“	70	155	172	327	147	1	179
St. Mary's Infants' Home	“	80	69	153	222	144	2	76
Sacred Heart Orphanage	“	80	91	37	128	53	......	75
Working Boys' Home	“	43	45	126	171	127	1	43
Jewish Children's Home	“	45	48	24	72	28	......	44
Totals		**2,614**	**2,480**	**2,994**	**5,474**	**2,830**	**88**	**2,556**

ORPHANAGES—Continued

TABLE II

Name of Orphanage	Location	Total collective days' stay of inmates.	Total cost of dietaries.	Other maintenance costs.	Total maintenance cost.	Average cost of each inmate per day.
			$ c.	$ c.	$ c.	$ c.
St. Joseph's Orphanage	Cobourg	10,163	1,153 45	2,895 68	4,049 13	40
Nazareth Orphanage	Cornwall	17,457	3,040 53	5,867 47	8,908 00	51
St. Joseph's Orphanage	Fort William	38,007	8,064 20	22,724 06	30,788 26	81
Boys' Home	Hamilton	15,135	2,671 69	7,866 35	10,538 04	70
Girls' Home	"	14,078	3,151 18	8,622 27	11,773 45	84
Home for Friendless and Infants' Home	"	25,965	7,524 90	12,138 16	19,663 06	76
St. Mary's Orphan Asylum	"	43,705	11,342 92	20,387 53	31,730 45	75
Salvation Army Rescue Home	"	11,050	3,002 87	8,865 62	11,868 49	1 07
Orphans' Home and Widows' Friend Society	Kingston	4,580	963 79	8,900 45	9,864 24	2 15
St. Mary's of the Lake Orphanage	"	18,827	4,843 40	10,651 04	15,494 44	82
Kitchener Orphanage	Kitchener	9,855	1,534 11	4.202 05	5,736 16	58
Protestant Orphans' Home	London	17,681	3,476 76	8,570 17	12,046 93	68
Roman Catholic Orphans' Home	"	70,654	15,690 15	27,627 95	43,318 10	61
Ronald Gray Memorial Home	"	11,027	1,996 04	5,008 60	7,004 64	63
Salvation Army Rescue Home and Children's Shelter	"	14,959	....	....	....	*
Misericordia Refuge and Orphans' Home	Ottawa	58,730	20,049 23	72,947 69	92,996 92	1 58
Ottawa Protestant Infants' Home	"	12,449	3,276 55	17,520 44	20,796 99	1 67
Protestant Orphans' Home	"	9,395	4,409 64	12,811 24	17,220 88	1 83
St. Joseph's Orphanage	"	91,358	16,852 70	30,197 51	47,050 21	51
St. Patrick's Orphan Asylum	"	20,236	7,010 21	22,929 56	29,939 77	1 48
Salvation Army Rescue Home and Children's Shelter	"	25,067	4,378 50	14,734 39	19,112 89	76
St. Vincent Orphanage	Peterborough	8,532	2,088 14	5,738 29	7,826 43	92
Loyal True Blue Orphanage	Richmond Hill	50,123	6,974 53	23,015 70	29,990 23	60
St. Agatha Orphanage	St. Agatha	13,210	4,035 75	8,405 69	12,441 44	94
Protestant Orphans' Home	St. Catharines	11,886	2,062 70	4,957 90	7,020 60	59
Boys' Home	Toronto	17,892	4,668 13	13,169 53	17,837 66	1 00
Infants' Home and Infirmary	"	100,972	....	106,710 41	106,710 41	1 06
Protestant Children's Home	"	59,619	29,674 86	32,455 05	62,129 91	1 04
St. Mary's Infants' Home	"	23,922	10,440 90	16,178 65	26,619 55	1 11
Sacred Heart Orphanage	"	30,839	5,971 24	14,033 06	20,004 30	65
Working Boys' Home	"	15,860	5,623 62	9,295 36	14,918 98	94
Jewish Children's Home	"	17,434	5,094 62	11,287 35	16,381 97	94
Totals		**890,667**	**201,067.31**	**570,715.22**	**771,782.53**	**87**

*Financial return included in Hospital report.

ORPHANAGES—Continued

TABLE III

Name of Orphanage	Location	Income from Provincial Government for grant.	Income from patients for maintenance and treatment, miscellaneous sales, etc.	Income from municipalities for patients' maintenance and treatment.	Income from investments, endowments, etc.	Income from donations, bequests and other gratuitous income.	Total income from all sources.
		$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
St. Joseph's Orphanage	Cobourg	518 15	3,196 00	1,089 64	....	....	4,803 79
Nazareth Orphanage	Cornwall	872 80	1,182 75	....	....	6,826 81	8,882 36
St. Joseph's Orphanage	Fort William	1,929 25	7,201 25	7,196 99	40 00	10,538 26	26,905 75
Boys' Home	Hamilton	773 15	1,578 25	3,207 18	2,396 62	2,901 70	10,856 90
Girls' Home	“	707 85	1,022 50	3,443 75	....	5,929 94	11,104 04
Home for Friendless and Infants' Home	“	1,860 95	3,199 35	6,975 99	1,309 85	8,450 99	21,797 13
St. Mary's Orphan Asylum	“	2,291 20	3,231 50	7,469 57	....	16,199 68	29,191 95
Salvation Army Rescue Home	“	877 90	7,480 76	1,610 20	16 38	856 45	10,841 69
Orphans' Home and Widows' Friend Society	Kingston	266 55	687 95	2,341 50	4,145 10	2,780 76	10,221 86
St. Mary's of the Lake Orphanage	“	1,946 55	4,448 69	....	....	8,128 45	14,523 69
Kitchener Orphanage	Kitchener	490 65	2,200 27	550 00	1,946 81	1,743 77	6,931 50
Protestant Orphans' Home	London	905 05	2,523 00	1,349 98	5,744 97	9,212 06	19,735 06
Roman Catholic Orphans' Home	“	3,605 60	4,220 40	1,400 00	....	34,424 99	43,650 99
Ronald Gray Memorial Home	“	550 00	3,287 71	....	....	256 00	4,093 71
Salvation Army Rescue Home and Children's Shelter	“	1,037 60	....	....	....	....	1,037 60
Misericordia Refuge and Orphans Home	Ottawa	4,012 70	53,609 93	2,903 80	45 65	20,905 33	81,477 41
Ottawa Protestant Infants' Home	“	611 40	8,029 03	1,425 70	3,122 41	11,493 22	24,681 76
Protestant Orphans' Home	“	500 90	3,686 67	1,460 30	2,113 66	60,710 64	68,472 17
St. Joseph's Orphanage	“	4,628 60	5,771 68	10,718 29	1,095 00	24,841 61	47,055 18
St. Patrick's Orphan Asylum	“	1,012 70	8,549 23	3,612 60	783 40	24,560 01	38,517 94
Salvation Army Rescue Home and Children's Shelter	“	1,657 80	8,505 93	797 00	....	1,841 04	12,801 77
St. Vincent Orphanage	Peterborough	419 55	332 14	288 00	....	6,545 44	7,585 13
Loyal True Blue Orphanage	Richmond Hill	2,538 65	7,044 95	....	4,981 30	38,645 61	53,210 51
St. Agatha Orphanage	St. Agatha	1,261 40	940 00	900 00	....	8,965 26	12,066 66
Protestant Orphans' Home	St. Catharines	589 16	890 67	....	4,928 45	3,931 78	10,340 06
Boys' Home	Toronto	889 30	5,104 43	3,555 07	3,387 14	9,387 24	22,323 18
Infants' Home and Infirmary	“	5,512 15	40,598 82	12,061 32	5,991 50	40,098 72	104,262 51
Protestant Children's Home	“	3,147 55	440 18	5,774 25	13,912 19	40,288 20	63,562 37
St. Mary's Infants' Home	“	1,724 85	980 50	1,589 32	22 92	15,508 55	19,826 14
Sacred Heart Orphanage	“	1,541 90	1,890 67	1,281 07	328 56	14,573 41	19,615 61
Working Boys' Home	“	658 80	11,421 85	500 00	48 13	2,849 13	15,477 91
Jewish Children's Home	“	862 65	5,313 61	1,251 87	....	8,676 59	16,104 72
Totals	....	**50,203.31**	**208,570.67**	**84,753.39**	**56,360.04**	**442,071.64**	**841,959.05**

COUNTY HOUSES OF REFUGE

County	Approximate value of Buildings	Approximate value of Contents	Approximate value of Land	Number of Acres	Average number of Inmates	Receipts		Amount Received from County Treasurer	Expenditures	Average weekly cost per Inmate
						Profits of Farm	Other Sources		Cost of Maintenance	
	$ c.	$ c.	$ c.			$ c.	$ c.	$ c.	$ c.	$ c.
Brant	150,000 00	2,500 00	4,500 00	45	85	....	21,539 78	....	20,803 12	4 40
Bruce	55,000 00	5,000 00	5,000 00	62	46	359 17	1,252 71	11,917	13,529 07	4 10
Elgin	40,000 00	2,500 00	7,000 00	100	38	1,283 34	2 47	20,179 20	10,571 46	4 69
Essex	35,000 00	10,000 00	20,000 00	65	47	3,470 35	1,720 78	12,001 84	17,193 07	4 91
Grey	72,000 00	4,500 00	5,000 00	96	72	1,722 27	1,986 60	4,832 38	12,381 19	3 18
Haldimand	23,000 00	10,200 00	5,400 00	56	30	2,705 92	1,378 18	....	12,557 29	2 96
Hastings	75,000 00	6,000 00	20,000 00	75	72	1,239 02	....	9,855 25	11,094 27	2 88
Huron	75,000 00	15,000 00	5,000 00	69	90	1,918 07	5,576 38	6,246 19	11,822 57	2 49
Kent	42,000 00	2,000 00	6,000 00	50	46	1,043 54	....	7,035 96	8,079 50	3 47
Lambton	75,000 00	10,000 00	12,000 00	60	50	570 80	2,321 30	9,886 34	12,778 44	4 91
Lanark	60,000 00	10,000 00	5,000 00	70	79	2,051 36	13,483 11	1,992 38	17,526 85	4 09
Leeds and Grenville	65,000 00	2,000 00	5,000 00	100	45	1,500 00	1,275 00	7,000 00	10,000 00	4 00
Lincoln	50,000 00	5,300 00	21,000 00	70	57	4,344 20	5,432 83	9,605 80	19,306 41	5 86
Middlesex	45,000 00	5,000 00	18,000 00	116	68	3,688 78	5,389 76	11,279 90	22,281 84	5 67
Norfolk	54,220 00	6,282 00	5,010 00	102	57	....	600 00	14,000 00	12,600 00	4 50
Northumberland and Durham	65,000 00	5,000 00	7,000 00	70	70	3,508 00	1,129 50	17,956 65	22,594 15	6 16
Ontario	40,000 00	4,000 00	6,000 00	62	53	800 00	1,581 99	11,516 18	13,098 17	5 60
Oxford	35,000 00	6,000 00	7,000 00	100	60	2,436 62	2,572 74	8,510 45	13,519 81	2 86
Peel and Halton	72,950 00	11,587 84	8,000 00	48	75	....	4,149 52	10,900 00	15,605 24	4 00
Perth	50,000 00	3,000 00	5,000 00	53	67	380 85	1,840 36	8,425 33	10,646 54	2 50
Peterborough	25,250 00	2,500 00	5,250 00	96	21	816 54	934 47	8,406 65	6,115 47	4 67
Prescott and Russell	17,600 00	11,500 00	2,800 00	100	63	3,008 73	757 35	23,899 46	24,656 81	4 14
Prince Edward	35,000 00	6,000 00	2,500 00	45	44	1,665 07	3,336 71	....	9,232 26	3 31
Simcoe	48,000 00	13,883 00	4,000 00	100	98	2,000 00	3,852 00	19,913 18	24,745 18	4 85
Stormont, Dundas and Glengarry	50,000 00	8,000 00	10,000 00	140	36	710 04	2,487 44	18,433 58	21,631 46	3 56
Victoria	102,170 60	18,829 40	8,344 77	65	73	937 76	2,941 38	14,244 98	18,124 12	4 77
Waterloo	163,000 00	7,000 00	20,000 00	100	142	1,085 70	2,371 99	650 00	44,978 92	6 05
Welland	35,600 00	8,500 00	6,000 00	60	80	1,136 41	5,737 01	20,205 86	13,332 44	3 24
Wellington	80,000 00	6,500 00	5,000 00	58	67	400 00	4,442 71	10,970 83	9,650 48	2 47
Wentworth	65,000 00	6,000 00	14,000 00	188	60	2,607 41	1,661 98	16,955 06	12,685 67	4 06
York	150,000 00	5,000 00	14,000 00	140	93	1,900 00	8 00	19,000 00	6,600 00	1 32

SIXTY-SECOND ANNUAL REPORT

OF THE

INSPECTOR OF PRISONS AND PUBLIC CHARITIES

UPON THE

Hospitals for the Insane Feeble-minded and Epileptic

OF THE

PROVINCE OF ONTARIO

Being for the Year ended 31st October

1929

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO

SESSIONAL PAPER No. 15, 1929

ONTARIO

TORONTO:
Printed and Published by Herbert H. Ball, Printer to the King's Most Excellent Majesty
1930

INTRODUCTION

The Ontario Hospital system includes twelve public institutions; nine of which are maintained for the special treatment of the insane; one for the criminal insane; one for epileptics; and one for idiots and feeble-minded, with a total bed capacity of 9,565 persons.

In the introduction of the Ontario Hospital Report for 1928 a full description is given of the location and general equipment of each of these institutions. From the report for 1929 it may be noted that there has been a substantial increase in the hospital population, the total number admitted being 2,328, an increase of 280, and the total number under treatment being 12,102, an increase of 347.

Excluding the criminal insane at Guelph Hospital, the cost of which is shown in the cost of the Reformatory, the total number of days stay in the Ontario Hospitals in 1929 was 3,454,305. In 1928 the total days stay was 3,391,604. This shows an increase of 62,701 days stay.

Notwithstanding the large increase in the hospital population and in the days stay, we find by accurate calculation that the actual cost per patient per day was slightly over one cent less in 1929 than in 1928. In 1928 the figures show a daily cost per patient of $1.21. In 1929 the cost was $1.20. This item in itself is small, but based on the total days stay it amounts to $34,543.05 in a year.

In comparison with the earlier methods of treatment and with the methods in use in other countries, it is noteworthy to find that there is in Ontario a much greater interest manifested by the public in general, and by physicians in particular, in the prevention of chronic insanity. The trend of psychiatric methods appears to point to the adoption of prophylactic action and to the application of bio-chemistry as an important aid in successfully solving this problem. The insane mind may develop from one or many causes — immediate or remote, as may be seen from Table No. 6; but, irrespective of the causes, the issue is an unadjusted personality or an unbalanced metabolism and the remedy lies in the restoration of these conditions to the normal.

H. M. Robbins,
Deputy Provincial Secretary.

A. L. McPherson,
Inspector of Prisons and Public Charities.

ONTARIO HOSPITAL, BROCKVILLE

November 21st, 1929.

Re Annual Report.
H. M. Robbins, Esq.,
Deputy Provincial Secretary,
Parliament Buildings,
Toronto, 5, Ontario.

Dear Sir:

In compliance with the Statute, I beg herewith to present the thirty-fourth Annual report of this Hospital, together with the statistical data for the year ending October 31st, 1929.

At the commencement of the fiscal year, we had a population of 839 in residence and 36 on probation and, having admitted 220 in all, have at the close of this year 867 in residence and 44 on probation.

We have continued to conduct an Out-Patients' Department for Neuro-Syphilitic cases and a considerable number have been sent to us by the physicians of the district assigned to us.

Re Schizophrenia (*Dementia Praecox*): We have continued to use, with most satisfactory results, Walbum's method of introducing Manganese Chloride intravenously and have administered 1,111 injections. In this connection, I may say that in May, 1929, I had the pleasure of reporting at the annual meeting of the American Psychiatric Association our results in 230 patients, which were most encouraging and hopeful.

In surgical work we have been ably assisted by town surgeons, Drs. A. H. Judson, H. E. Preston, T. F. Robertson, E. J. F. Williams, and in all 37 major operations have been performed with most satisfactory results.

In minor surgery, etc., the following work was done by our own staff:

General Anaesthesia	114	cases
Local Anaesthesia	70	"
Fractures reduced and splinted	9	"
Minor Operations	133	"
Paracentesis	13	"
Violet Rays administered	98	"
Autopsies	11	"

The Laboratory work has been most energetically and satisfactorily carried on and the intravenous and interstitial injections of Malaria-infected blood, Tryparsamide and other Arsenical preparations and Metallic Bismuth, etc., in Neuro and other forms of Syphilitic disease have shown most beneficial results—some 74 cases being thus treated.

For Blood Wassermann test, 337 samples were taken and 125 samples of cerebro-spinal fluid for Wassermann and Globulin tests.

The general repairs and painting have been well kept up and the premises are in good condition.

Re Telephone and Exterior Lighting Systems: The need of a more complete telephone system becomes increasingly urgent and it is sincerely hoped that this matter may be finally dealt with during the coming year.

The ground lighting system is absolutely inadequate and its improvement should receive early consideration.

Thanking you for your ever-ready kindness and courtesy, I am,

Your obedient servant,
W. M. English,
Superintendent.

ONTARIO HOSPITAL, COBOURG

November 22nd, 1929.

Mr. H. M. Robbins,
Deputy Provincial Secretary,
Parliament Buildings,
TORONTO, ONT.

SIR:

I have the honour to transmit herewith the Annual Report of the Ontario Hospital, Cobourg, for the year ending 31st October, 1929.

Though we have not accomplished all the work we had hoped to this year we were able to achieve a number of improvements.

The installation of the refrigerator plant has made a remarkable difference in the facility of the domestic work, and the certainty of a supply of ice of known purity is not only a comfort but a safeguard.

The building formerly used as an ice-house is being converted into a carpenter shop. This work is approaching completion, and will give ample and much-needed accommodation to replace the cramped quarters of the old shop in the basement under one of the dormitories; not only inadequate for present requirements, but perhaps also a source of insecurity.

There have been several changes on our staff this year. We sustained the loss of our Bursar, Mr. H. J. Spence, who died on the 22nd of December, 1928, of an acute pneumonia. Mr. Spence had been many years in the service; he was a man who, in his earlier years, had taken an active interest in public affairs, and was no mean orator. A genial, but remarkable personality such as his would be greatly missed from any community. The position of bursar and steward has been filled by the transfer of Mr. W. C. Waller from a similar position in Penetanguishene.

Dr. F. LeDrew, an able and efficient medical officer, resigned to fill a similar position at considerably increased remuneration in Massachusetts. The position thus made vacant has been filled by the appointment of Dr. W. A. Cardwell, the post of second assistant being still vacant.

Our efficient head nurse, Miss M. E. Snyder, resigned, having sought retirement, and is succeeded by the promotion of Miss E. J. Puttick, who, having acted for some time as assistant, was well qualified for the position.

There have been, of course, numerous occasions when complicating conditions have arisen, and I must express my thanks for the kind co-operation and support that you have given in all such emergencies.

I have the honour to be, sir,

Your obedient servant,
W. C. HERRIMAN,
Superintendent.

THE ONTARIO HOSPITAL

Hamilton, Ont., November 18, 1929.

H. M. Robbins, Esq.,
Deputy Provincial Secretary,
Parliament Buildings,
Toronto, Ont.

Sir:

I have the honor to submit to you the fifty-fourth annual report for the Ontario Hospital, Hamilton, for the year ending October 31st, 1929.

I have the honor to remain,

Your obedient servant,
J. J. Williams,
Superintendent.

ROCKWOOD HOSPITAL

Kingston, Nov. 22nd, 1929.

Re Annual Report.
H. M. Robbins, Esq.,
Deputy Provincial Secretary,
Toronto, Ont.

Dear Sir:

Under separate cover I am today forwarding the annual report for Rockwood Hospital, Kingston, for the fiscal year ending October 31st, 1929.

Yours sincerely,
Edward Ryan

ONTARIO HOSPITAL, LONDON

November 21, 1929.

Re Annual Report—1928-29.
H. M. Robbins, Esq.,
Deputy Provincial Secretary,
Parliament Buildings,
Toronto, Ont.

Dear Sir:

I beg to enclose herewith the annual report of the Ontario Hospital, London, for the year ending October 31, 1929.

The sudden and tragic death of our late Superintendent, Doctor W. J. Robinson, on September 3rd last, was a great shock to all of us, as it was to his family. No one had realized that he was suffering from a severe Cardiac condition. He died "in harness" and, knowing him as we did, it is unlikely that he would have had it otherwise.

He lived long enough to see numerous alterations and improvements practically completed and this gave him considerable satisfaction. It is needless to state that his presence is greatly missed about the institution by patients quite as much as by the staff. He was a man who always knew his patients and, having been superintendent here for over twenty-one years, a great many of the older patients especially had become greatly attached to him. Doctor Robinson will long be remembered as one of the most kindly and humane, as well as one of the most successful superintendents.

I have the honour to be, sir,

Your obedient servant,
C. S. TENNANT,
Acting Superintendent.

ONTARIO HOSPITAL, MIMICO

November 22nd, 1929.

H. M. Robbins, Esq.,
Deputy Provincial Secretary,
Parliament Buildings,
Toronto 5, Ontario.

Dear Sir:

I enclose herewith the statistical report of the Ontario Hospital, Mimico, for the year 1928-29.

Yours truly,
F. S. VROOMAN,
Superintendent.

THE ONTARIO HOSPITAL, TORONTO

November 19, 1929.

H. M. Robbins, Esq.,
Deputy Provincial Secretary,
Parliament Buildings,
Toronto.

Dear Sir:

I am enclosing herewith the annual report for this Hospital for the year ending October 31st, 1929.

I have the honour to remain,

Your obedient servant,
H. A. MCKAY,
Superintendent.

ONTARIO HOSPITAL, WHITBY

November 15th, 1929.

H. M. Robbins, Esq.,
Deputy Provincial Secretary,
Parliament Buildings,
Toronto, Ont.

Sir:

MOVEMENT OF PATIENTS.

More patients have been under treatment than in any previous year. On October 31, 1928, there were in hospital 1,541 patients, and 71 on probation. During the year ended October 31, 1929, there were admitted 435 patients. Patients discharged totalled 269, being 62 per cent. of the number admitted. There were 124 deaths during the year. On October 31, 1929, there were 1,537 patients in residence, and 68 more on probation, a total of 1,605 on the hospital books.

DIAGNOSIS AND TREATMENT.

During the year our diagnostic and treatment facilities have been fully used, and have been increased by the addition of an ultra-violet lamp, and a Basal Metabolism apparatus. An attendant was engaged, who had been an X-ray assistant, and we have used him in our X-ray department, and have also trained him to perform urinalysis, and make blood counts. At the present time every patient admitted has, in addition to a thorough physical examination, an X-ray examination of the teeth, and any other parts which the physician in charge may request, a routine dental examination, and necessary dental attention, a routine urinalysis, blood count, and blood wasserman test. I hope that in due time every patient admitted may have still further special examinations, such as eye, ear, nose and throat, and gynecological. To do this we should have specialists in these departments to make the examinations and prescribe and give such treatment as may be necessary. An internist to advise on general medical problems, and one who could visit the hospital frequently and consult with the medical staff, would be a valuable asset to the hospital. I would also recommend the appointment to the staff of a pathologist, at least part time, but preferably full time, to correlate the pathological with the clinical findings.

I would also recommend the establishment of a social service department by the appointment of at least one psychiatric social worker. Wherever a psychiatric social service has been established, it has been found that more patients can be placed on probation, and re-established in the community. The social workers find positions for patients, and assist them until they are making a satisfactory adjustment, encourage the patients by frequent visits, and endeavor to make the environment as congenial and helpful as possible for the patient. Such a department more than pays for itself by the increased number of patients that are able to leave the hospital,and the smaller number of re-admissions. Adequate follow-up work is so essential if these conditions are to be met. If one worker restores only five patients a year to the community who would otherwise be public charges in our mental hospitals, she more than pays for her salary, not to mention the added happiness, which cannot be valued in dollars, of the patients once more able to mingle with society.

MENTAL HYGIENE.

We believe it is the duty of our hospitals and staff to familiarize the public and medical profession with the work of the hospitals, and also with the general principles of mental hygiene. To this end a number of organizations have been entertained at the hospital, and addressed by the superintendent. The folowing are the organizations:

The Rotary Club, Oshawa
The Kiwanis Club, Oshawa
The Kinsmen's Club, Oshawa
District Number 5, Registered Nurses' Association
Annual Convention, Ontario Society of Occupational Therapy
Ontario County Medical Association
Autumn meeting, Ontario Neuro-psychiatric Association.

BUILDINGS, GROUNDS, ETC.

During the past year, all the temporary frame buildings used during the construction of this hospital have been razed, improving the general appearance of the grounds. The land on which these buildings were situated is being cleared up, and made to conform with the grounds already laid. More trees, chrubs, and flowers have been planted.

The two frame structures erected by the military authorities are still in full use, the one as an annex to our nurses' homes, accommodating 45 nurses; the other as an Occupational Therapy and industrial building.

The amusement hall continues to be a very active centre. The canteen has been a great convenience to both patients and staff. The profits have averaged about $100 per month, and have been used to purchase new books and periodicals for the library, upkeep of phonographs and radios, billiard tables and bowling alleys, the purchase of excellent pictures for the cottages, special entertainments for the patients, such as the Christmas show by professional entertainers and the fireworks display on Dominion Day, and lastly for gratuities to patients going on probration, who were without funds.

The library has issued more than 7,000 books during the year, 4,000 to patients, and the balance to staff. The bowling alleys and billiard tables are in constant use. The main floor of the amusement hall has been used for physical training class, badminton, and volley ball, as well as the regular moving picture shows, dances, entertainments and church services.

Two large tents without sides were purchased in the early summer, and one placed at the rear of each infirmary. Bed patients, who otherwise could not be brought out-doors, have been wheeled out in their beds, and placed under the tents, thereby getting ample shade with the opportunity of enjoying the fresh air and sunshine.

An incinerator has been erected by the sewage plant, and now is ready for use. This should enable us to make better disposal of rubbish, and we will be able to do away with the old dump, which was rat infested, and is now being de-ratted.

The farm has been tile-drained, and much larger crops can now be expected.

The heating mains and new tunnels have been completed, and are all in use.

RECOMMENDATIONS.

The high waters of Lake Ontario caused the bank to recede as much as 30 feet in some places during the past year. I would recommend the building of a cement breakwater in front of the hospital property, and terracing the bank, to make it safer, and more attractive looking.

The stores building has not yet been started, and is very urgently needed

I would recommend the erection of a new unit for the nurses' home. As stated above, 45 nurses are living in a temporary frame building at a considerable distance from the other homes. The new unit could be larger than the other two, and placed between them, and all three could be linked together by connecting the living rooms, making what would really be one large building. The temporary building used as an annex could be used as a male attendants' home. Most of the attendants are now using rooms in the cottages, which would then be vacated, and make additional bed space for patients.

A so-called medical or clinical building was a part of the original plan for the hospital. In my opinion it would be a better plan to enlarge the present administration and reception building, and incorporate in it the features of the proposed medical building. The chief reason for this recommendation is as follows:—

Every patient, on admission, must have the most thorough physical examination possible, and treatment for any abnormal conditions found. At the present time the reception wards are not equipped with proper examination rooms or treatment rooms (except the hydrotherapy) and patients must be taken acrosss the grounds to the various buildings, where these features are located. This does not make for efficiency, and the patient is exposed to variable weather conditions with the possibility of further endangering his health. I would recommend that the rooms above the offices and kitchen, now used as officers' quarters and maids' quarters, be no longer used as such, and that they be remodelled to make examination, treatment and operating rooms, laboratories, dispensaries, X-ray, etc. One, or better still, two stories could be added to the one-storey reception wards, increasing our accommodation by either 60 or 120 beds. The rooms in other buildings now used for these treatment facilities would then be available for beds, or other purposes. If this plan is approved, a house for officers would need to be built, as well as a dormitory or house for the domestic staff.

JUVENILE COURT, OSHAWA.

In the spring of 1929, the facilities of this hospital were offered to the Judge of the newly organized juvenile court at Oshawa. Several cases have been examined, and the reports have assisted in a better understanding of some of the problems confronting the court.

BOARD OF VISITORS.

The Board of Visitors appointed to this hospital in September, 1928, have completed one year of service. A monthly meeting has been held and various departments of the hospital have been visited on each occasion. I am happy to pay tribute to the board for their untiring energy and sympathetic interest in the hospital in all its work. It has been a constant satisfaction to me to have their unfailing support at all times.

X-RAY DEPARTMENT.

This work has been continued under the personal direction of Dr. Webster, and has been of great value as an aid to accurate diagnosis. Dr. Webster is in the X-ray room every afternoon, and, during the year just closed, has made the following X-ray photographs:—

Head	25
Chest	30
Gastro-intestinal	5
Arms	39
Legs	28
Dental	1252
Others	9
Total	1388

STAFF MEETINGS.

During the year one hundred and ninety-four staff meetings have been held for discussing recent admissions, for interviewing new patients, and for patients who have improved to such an extent that probation is considered.

TRAINING SCHOOL FOR NURSES.

The training school has continued to develop. Every member of the training school has now at least minimum education requirement, and many have considerably more. We have now nearly sufficient nurses for the women's buildings, but it is hoped to extend the nursing service to the men's buildings as soon as possible. I would like to have at least eight more graduate nurses, so that each cottage could have a graduate supervisor. The resignation of the assistant superintendent of nurses, Miss Nellie Matthews, was regretfully accepted, effective October 31st.

OCCUPATIONAL THERAPY DEPARTMENT.

We have now four graduate occupational therapists, and are operating two workshops, one in the recreation hall for intensive work with recent admissions, and one in the occupational building. One aide is on duty each day in the women's pavilion. One half day a week the aides are one duty in the infirmaries. The occupational department is also extending its influence into the women's cottages. As many as 250 patients are in contact with this department. Occupation is provided also in many other ways, not directly under the control of this department. I want to commend most heartedly, Miss Richardson, chief occupational therapist, for her leadership in this most important form of treatment. This year she is giving a course of lectures and demonstrations to the nurses, so that they may be familiar with occupational therapy, and be able to use it throughout the hospital.

STAFF.

Our medical staff has consisted nominally of six physicians during the greater part of the year, but there have seldom been more than five actually on duty, as Dr. Stewart and Dr. R. C. Montgomery have both had leave of absence for three months' periods for study at the Psychopathic Hospital, Ann Arbor, Michigan.

Dr. E. R. Barton was appointed to the staff in February, 1929, and resigned Sept. 30, 1929. Dr. N. L. Walker was transferred from the Ontario Hospital, Toronto, to our staff October 1st, 1929.

I wish to take this opportunity of expressing my appreciation of the loyal efforts of all members of the staff and for their co-operation in the advancing of the work of the hospital.

My warmest thanks are also extended to the clergymen of the town of Whitby, who assist so much with the spiritual welfare of our patients. I also wish to thank the physicians and surgeons who have assisted when special examinations or treatments were required.

We are also greatly indebted to various organizations and individuals for entertainments and donations for special events.

Finally I wish to convey to you my sincere gratitude for the never-failing assistance you have given me in developing plans and facilities for improving the service we are all endeavoring to render to the patients under our care.

I remain,
Your obedient servant,
G. H. Stevenson, M.D.,
Superintendent.

ONTARIO HOSPITAL, ORILLIA, ONT.

November 27th, 1929.

Mr. H. M. Robbins,
Deputy Provincial Secretary,
Parliament Buildings,
Toronto, Ontario.

Dear Mr. Robbins:

I beg to submit herewith the annual report of the Ontario Hospital, Orillia, for the year ending October 31st, 1929.

Among the innovations and activities carried on during the year, one of the most important has been the extensive program of alterations and repairs. The large wards, having over one hundred patients each, have been so subdivided as to permit of caring for the patients in smaller groups and more effectively. The administration section has been equipped with a fireproof stairway, and offices renovated and extended to make provision for the extra office staff made necessary by the ever increasing population.

With a view to finding suitable occupation for some of our adult male patients of low intellectual level, we began in the spring of 1929 to clear some swamp land, and during the season prepared for cultivation some twenty acres of virgin soil. This work was done by one hundred adult male patients whose mental age did not average over four years, and required the supervision of only two attendants. Besides giving an occupational outlet to this type of patient, the plan has given us an additional twenty acres of tillable soil for our 1930 crop.

In the medical and nursing division, a routine system of immunization of both patients and staff against contagious diseases, such as scarlet fever and diphtheria, has resulted in a considerable decrease in this type of illness among our population. The first class of pupil-nurses in our training school, begun in 1928, successfully passed their first-year examinations last May, and in addition a second class have been received into the school, thus making for still greater efficiency in the nursing care of sick patients. One of the nurses in training also does certain routine laboratory tests on new admissions and sick patients, thus aiding in the diagnosis and treatment of same. A social service nurse has been added to the staff, who has been of assistance in follow-up work on out-patients.

Since the operation of the policy whereby the higher grade patients could be trained to take positions in the community, 69 cases have been placed on probation, only 12 of whom have been returned as unsatisfactory. Thirty-three have been discharged and two returned because of lack of employment, so that this plan would appear to be a worth-while one, and to justify the thought and energy expended in the preparation and operation of a system of education and training whereby these high-grade defectives may be prepared to take their opportunity to make a successful adjustment outside the institution.

During the year, four of the heads of departments visited five of the institutions for the feeble-minded in New York and Massachusetts. As a result of this visit and the information gained, many innovations have been made which contributed to the health and happiness of the patient population. An elementary occupational class has been inaugurated, in which some sixty odd girls of the lower grades of intelligence are employed performing such simple operations as unravelling cloth, sewing strips together for mats, etc. Similarly for the boys of low intelligence what is known as the farm training yard has been inaugurated, in which the patients learn to pile stones, shovel dirt, carry wood, etc. While the patients in these classes will, in all probability, never be able to leave the institution, the types of occupation carried on makes them happier here, and, especially in the case of the boys, should materially reduce the cost of maintenance of the institution in that this training will enable those participating in it to later assist in the clearing of land and other general farm utility tasks.

We appreciate very much the co-operation which has been afforded us during the year by the various social organizations existing in the province. The increasing number of applications, however, and the present over-crowded condition of the institution, is making the work of the staff very difficult, and it is quite apparent that some effort should be made toward dealing with the problem of mental health unless a very extensive building program is to be undertaken at once to relieve the present congestion and meet the demands of the community.

I wish to express to you our appreciation of your kind advice in the administrative details connected with the institution, and to thank you for your continued assistance and co-operation.

I have the honour to be, sir,

Your obedient servant,
B. T. McGhie, M.D.,
Superintendent.

ONTARIO HOSPITAL, WOODSTOCK

November 19th, 1929.

To Mr. H. M. Robbins,
Deputy Provincial Secretary,
Toronto, Ontario.

Sir:

I beg to present the annual report of the Ontario Hospital, Woodstock, for the year ending October 31st, 1929.

I have the honour to be, sir,

Your obedient servant,
T. D. Cumberland,
Medical Superintendent.

THE ONTARIO HOSPITAL, GUELPH, CANADA

November 16, 1929.

H. M. Robbins, Esq.,
Deputy Provincial Secretary,
Parliament Buildings,
Toronto, Ont.

Dear Sir:

Enclosed please find the annual report for this institution for the year ending October 31, 1929.

Yours very truly,
A. C. Wallace,
Medical Officer

TABLE No. 1.

Contains information in regard to the date of opening of the Hospitals, the acreage, and the real estate value of the property, not including the value of the buildings.

Name of Hospital	Date of Opening	Acreage		Acres in Fruit and Vegetables	Acres in Grain	Acres in Buildings & Grounds	Acres in Bush or not Cultivated	Value of Real Estate
		Owned	Rented					
Brockville	1894	569	....	40	369	35	125	$ 64,860
Cobourg	1920	11.58	....	4.28	....	7.3	....	16,500
Hamilton	1876	525	....	87	364	74	....	50,000
Kingston	1854	257.53	....	13	154.53	90	....	68,600
London	1870	505	14	105	306	70	38	180,000
Mimico	1890	136	....	35	51	50	....	350,000
Orillia	1876	500	30	71	175	30	254	48,000
Penetang	1904	383	....	20	90	13	260	6,000
Toronto	1846	20	....	5	....	15	....	300,000
Whitby	1920	640	....	125	365	150	....	128,000
Woodstock	1906	324	....	15	222	27	60	24,300
*Guelph	1921	......	......	......	......	......	......	......
		3,871.11	44	520.28	2,096.53	561.30	737.	$1,236,260

* Property comprises east wing of the Ontario Reformatory. The Hospital owns no property.

TABLE No. 2.

Furnishes a summary of the entire staffs at each Institution, together with the kind of work at which they are employed. The Superintendents of the various Hospitals are thereby enabled to make a comparative study of this phase of their operation.

Hospitals	Superintendent	Assistant Superintendent	Assistant Physician	Dentist	Steward and Assistants	Storekeeper	Other Clerks, Stenographers, etc.		Matron and Assistants	Dietitians	Graduate Nurses	Other Female Nurses	Male Attendants	Social Workers	Teachers	Occupational Workers	Kitchen and Dining Room Help		Laundry and Other Domestic Help		Farmers Gardeners and Assistants	EngineersandOther Mechanical Staff	Other Male Employees	Other Female Employees	Totals
							M.	F.									M.	F.	M.	F.					
Brockville	1	1	2	1	2	1	1	3	....	1	14	59	71	....	....	3	3	9	2	5	9	18	7	3	216
Cobourg	1	....	1	1	1	....	....	2	1	....	3	27	....	....	....	....	....	4	....	3	2	5	5	....	56
Hamilton	1	1	5	1	2	1	3	3	1	....	14	60	74	....	....	10	3	12	3	9	11	16	4	2	236
Kingston	1	1	5	1	1	1	....	4	....	....	3	65	73	....	....	2	3	4	1	6	6	13	1	2	193
London	1	1	5	1	2	2	1	3	....	1	11	51	80	....	....	3	2	27	3	20	14	23	6	2	259
Mimico	1	1	2	1	2	2	....	2	1	....	6	38	47	....	....	3	2	7	1	6	7	12	12	....	153
Orillia	1	1	3	1	1	1	4	6	....	....	6	56	58	1	11	14	4	13	2	7	10	12	2	....	214
Penetang	1	1	....	1	1	....	....	1	1	....	....	21	15	....	....	....	....	4	1	4	5	5	5	....	66
Toronto	1	1	1	1	2	1	1	2	....	....	7	56	55	....	....	3	1	8	1	6	1	14	1	1	164
Whitby	1	1	4	1	2	1	3	4	....	1	11	102	85	....	....	4	11	13	2	10	14	19	4	2	295
Woodstock	1	....	1	1	1	....	....	2	1	....	....	13	14	....	....	....	2	3	....	1	7	4	2	1	54
Guelph	1	....	2	1	....	....	....	....	....	....	....	....	16	....	....	....	....	....	....	....	....	....	....	....	20
	12	9	31	12	17	10	13	32	5	3	75	548	588	1	11	42	31	104	16	77	86	141	49	13	1926

TABLE No. 3.

Is the first table dealing with patients and furnishes the Psychoses and Industrial classification. The interest in this table lies in the variation of employment as shown at the different Hospitals.

	PSYCHIATRIC CLASSIFICATION														INDUSTRIAL CLASSIFICATION													
	Number of Patients Insane		Number of Patients Epileptic		Number of Mental Defectives		Number of Alcoholics		Number of Drug Addicts		Number of Neuro Syphilitics		All Other Types		Industrial Work		Farm and Garden Work		General Internal Work		General External Work		No. Regular Work		Total		Total
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
Brockville	444	421	....	....	....	....	....	....	....	....	....	....	1	1	30	135	40	....	100	64	64	75	211	148	445	422	867
Cobourg	....	378	....	....	....	35	....	....	....	....	....	....	....	....	....	....	....	....	....	156	....	....	....	257	....	413	413
Hamilton	568	582	....	....	10	1	....	....	....	....	....	....	....	....	51	62	84	....	224	138	66	21	153	362	578	583	1161
Kingston	465	354	....	....	....	....	....	....	....	....	....	....	....	....	76	105	55	....	121	85	94	....	119	164	465	354	819
London	635	683	....	....	12	8	4	....	1	2	....	....	1	....	47	151	103	....	154	218	126	....	223	324	653	693	1346
Mimico	317	333	....	....	....	....	....	....	....	....	....	....	....	....	12	57	70	....	71	136	35	....	129	140	317	333	650
Orillia	3	7	61	66	649	633	....	....	....	....	1	....	3	2	254	230	143	....	164	230	21	....	135	248	717	708	1425
Penetang	166	205	....	....	21	5	....	1	....	....	....	....	....	....	28	32	48	....	32	20	....	....	79	159	187	211	398
Toronto	396	488	....	....	....	....	....	....	....	....	....	....	....	....	10	45	25	....	90	95	50	....	221	348	396	488	884
Whitby	761	769	1	1	2	1	1	....	....	....	....	....	1	....	38	120	75	....	166	160	227	91	260	400	766	771	1537
Woodstock	15	14	78	83	....	....	....	....	....	....	....	....	....	....	....	....	20	....	40	48	12	....	21	49	93	97	190
Guelph	108	....	....	....	4	....	....	....	....	....	....	....	....	....	9	....	16	....	18	....	....	....	69	....	112	....	112
	3878	423	140	150	698	683	5	1	1	2	1	....	6	3	555	937	679	....	1180	1350	695	187	1620	2599	4729	5073	9802

TABLE

Showing Movement of

PARTICULARS—	BROCKVILLE			COBOURG		
	Male	Female	Total	Male	Female	Total
Patients in Hospitals beginning of year	429	410	839	....	412	412
Patients on probation beginning of year	11	25	36	....	3	3
Total number of Patients	440	435	875	....	415	415
First admissions during the year	90	74	164	....	19	19
Readmissions during the year	25	24	49	....	5	5
Transfers during the year	3	4	7	....	5	5
Total admissions during the year	118	102	220	....	29	29
	558	537	1095	....	444	444
Classification of admissions:						
By Physicians' Certificate	103	97	200	....	23	23
By Inspectors' Warrant	6	4	10	....	6	6
By Lieut.-Governor's Warrant	....	....	....	....	....	....
By Voluntary Application	9	1	10	....	....	....
Total	118	102	220	....	29	29
Discharged during the year	47	52	99	....	5	5
Died during the year	46	38	84	....	18	18
Transferred to Other Hospitals	....	1	1	....	4	4
Eloped during the year	....	....	....	....	....	....
Total	93	91	184	....	27	27
Classification of Discharges:						
As Recovered	11	19	30	....	....	....
As Improved	35	33	68	....	5	5
As Unimproved	1	....	1	....	....	....
As Without Psychosis	....	....	....	....	....	....
Total	47	52	99	....	5	5
Patients in Hospital end of year	445	422	867	....	413	413
Patients on Probation or Absent end of year	20	24	44	....	4	4
Total	465	446	911	....	417	417
Total Number Admitted since Opening	3009	2927	5936	....	759	759
Total Number Discharged and Eloped since Opening	1533	1617	3150	....	165	165
Total Number Died since Opening	1011	446	1875	....	177	177
Balance on Hospital Books end of year	465	864	911	....	417	417

No. 4.

Insane Population.

Hamilton			Kingston			London			Mimico		
Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
581	582	1,163	396	293	689	651	691	1,342	322	315	637
29	24	53	4	5	9	32	24	56	7	11	18
610	606	1,216	400	298	698	683	715	1,398	329	326	655
116	130	246	60	50	110	134	149	283	59	83	142
30	35	65	24	15	39	53	65	118	9	10	19
2	4	6	70	55	125	1	4	5	......	1	1
148	169	317	154	120	274	188	218	406	68	94	162
758	775	1,533	554	418	972	871	933	1,804	397	420	817
98	133	231	78	89	167	130	193	323	19	55	74
45	30	75	63	27	90	39	15	54	45	38	83
......	......	......	......	......	......	......	......	......	......	......	......
5	6	11	13	4	17	19	10	29	4	1	5
148	169	317	154	120	274	188	218	406	68	94	162
90	81	171	50	37	87	136	119	255	38	39	77
59	45	104	37	25	62	64	89	153	17	22	39
......	32	32	......	2	2	......	......	......	25	26	51
2	......	2	2	......	2	......	......	......	......	......	......
151	158	309	89	64	153	200	208	408	80	87	167
8	11	19	25	13	38	62	62	124	11	17	28
67	54	121	22	23	45	72	53	125	21	20	41
4	10	14	3	1	4	2	4	6	6	2	8
11	6	17	......	......	......	......	......	......	......	......	......
90	81	171	50	37	87	136	119	255	38	39	77
578	583	1,161	461	345	806	652	693	1,345	313	327	640
29	34	63	4	9	13	19	32	51	4	6	10
607	617	1,224	465	354	819	671	725	1,396	317	333	650
5,511	5,394	10,905	4,043	3,337	7,380	6,056	5,788	11,844	2,802	2,531	5,333
2,993	3,085	6,078	2,365	1,995	4,360	3,342	3,167	6,509	1,617	1,478	3,095
1,911	1,692	3,603	1,213	988	2,201	2,043	1,896	39,39	868	720	1,588
607	617	1,224	465	354	819	671	725	1,396	317	333	650

TABLE

Showing Movement of

PARTICULARS—	ORILLIA			PENETANG		
	Male	Female	Total	Male	Female	Total
Patients in Hospitals beginning of year	688	663	1351	169	218	387
Patients on Probation beginning of year	18	16	34	....	1	1
Total Number of Patients	706	679	1385	169	219	388
First Admissions During the Year	73	68	141	10	8	18
Readmissions during the year	4	4	8	2	....	2
Transfers during the year	....	....	....	10	....	10
Total Admissions during the year	77	72	149	22	8	30
	783	751	1534	191	227	418
Classification of Admissions:						
By Physicians' Certificate	71	72	143	17	6	23
By Inspectors' Warrant	6	....	6	5	2	7
By Lieut.-Governor's Warrant	....	....	....	....	....	....
By Voluntary Application	....	....	....	....	....	....
Total	77	72	149	22	8	30
Discharged during the year	32	25	57	....	5	5
Died during the year	18	13	31	3	9	12
Transferred to Other Hospitals	16	5	21	1	....	1
Eloped during the year	....	....	....	....	....	....
Total	66	43	109	4	14	18
Classification of Discharges:						
As Recovered	....	....	....	....	....	....
As Improved	30	23	53	....	1	1
As Unimproved	2	2	4	....	4	4
As without Psychosis	....	....	....	....	....	....
	32	25	57	....	5	5
Patients in Hospital end of year	697	691	1388	187	211	398
Patients on Probation or Absent end of year	20	17	37	....	1	1
Total	717	708	1425	187	212	399
Total Number Admitted since Opening	2503	2033	4536	436	530	966
Total Number Discharged and Eloped since Opening	582	286	868	71	70	141
Total Number Died since Opening	1204	1039	2243	178	248	426
Balance on Hospital Books end of year	717	708	1425	187	212	399

No. 4.

Insane Population.

Toronto			Whitby			Woodstock		
Male	Female	Total	Male	Female	Total	Male	Female	Total
354	451	805	779	762	1,541	93	95	188
12	12	24	35	36	71	1	....	1
366	463	829	814	798	1,612	94	95	189
165	137	302	197	184	381	20	22	42
49	64	113	29	22	51	3	2	5
4	3	7	1	2	3	....	....	....
218	204	422	227	208	435	23	24	47
587	667	1,251	1,041	1,006	2,047	117	119	236
94	152	246	122	163	285	21	24	45
94	34	128	60	27	87	....	....	....
....	....	....	....	....	....	....	....	....
30	18	48	45	18	63	2	....	2
218	204	422	227	208	435	23	24	47
125	139	264	137	132	269	19	11	30
60	37	97	65	29	124	5	11	16
3	3	6	45	4	49	....	....	....
....	....	....	....	....	....	....	....	....
188	179	367	247	195	442	24	22	46
27	46	73	53	58	111	....	1	1
87	80	167	74	63	137	7	3	10
7	7	14	10	11	21	12	7	19
4	6	10	....	....	....	....	....	....
125	139	264	137	132	269	19	11	30
386	465	851	766	771	1,537	93	96	189
10	23	33	28	40	68	....	1	1
396	488	884	794	811	1,605	93	97	190
9,737	9,328	19,065	1,944	1,882	3,826	522	419	941
7,274	7,053	14,327	769	750	1,519	245	169	414
2,641	2,097	4,738	378	321	699	184	153	337
584	667	1,251	797	811	1,608	93	97	190

TABLE No. 4.

Showing Movement of Insane Population.

PARTICULARS—	GUELPH			GRAND TOTAL		
	Male	Female	Total	Male	Female	Total
Patients in Hospitals beginning of year	113	....	113	4575	4892	9467
Patients on Probation beginning of year	1	....	1	150	157	307
Total Number of Patients	114	....	114	4725	5049	9774
First Admissions during the year	5	....	5	929	924	1853
Readmissions during the year	1	....	1	229	246	475
Transfers during the year	....	....	....	91	78	169
Total Admissions during the year	6	....	6	1249	1248	2497
	120	....	120	5974	6297	12271
Classification of Admissions:						
By Physicians' Certificate	....	....	....	753	1007	1760
By Inspectors' Warrant	2	....	2	365	183	548
By Lieut.-Governor's Warrant	4	....	4	4	....	4
By Voluntary Application	....	....	....	127	58	185
Total	6	....	6	1249	1248	2497
Discharged during the year	7	....	7	681	645	1326
Died during the year	1	....	1	375	366	741
Transferred to Other Hospitals	....	....	....	90	77	167
Eloped during the year	....	....	....	4	....	4
Total	8	....	8	1150	1088	2238
Classification of Discharges:						
As Recovered	....	....	....	197	227	424
As Improved	5	....	5	420	358	778
As Unimproved	....	....	....	47	48	95
As Without Psychosis	2	....	2	17	12	29
	7	....	7	681	645	1326
Patients in Hospital end of year	109	....	109	4687	5017	9704
Patients on Probation or Absent end of year	3	....	3	137	191	328
Total	112	....	112	4824	5208	10032
Total Number Admitted Since Opening	187	....	187	36,750	34,928	71,678
Total Number Discharged and Eloped since Opening	51	....	51	20,842	19,835	40,677
Total Number Died Since Opening	24	....	24	11,655	10,195	21,850
Balance on Hospital Books end of year	112	....	112	5,015	5,387	10,402

TABLE

Provides an opportunity for the study of the Parentage of patients admitted during the year. The Table is divided between

Age Groups	Aggregate			Native-Born														
				Total			Parentage											
							Native			Foreign			Mixed			Unascertained		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Under 15 years	62	47	109	58	46	104	39	24	63	13	14	27	1	2	3	5	6	11
15-19 years	63	53	116	49	48	97	25	35	60	13	6	19	5	1	6	6	6	12
20-24 years	83	59	142	57	34	91	33	17	50	6	6	12	4	6	10	14	5	19
25-29 years	87	65	152	56	48	104	33	31	64	5	7	12	8	2	10	10	8	18
30-34 years	104	92	196	53	65	118	21	31	52	4	6	10	10	11	21	18	17	35
35-39 years	89	94	183	49	65	114	28	33	61	4	5	9	6	8	14	11	19	30
40-44 years	81	87	168	50	52	102	23	23	46	9	4	13	7	8	15	11	17	28
45-49 years	64	87	151	35	58	93	14	36	50	7	6	13	5	9	14	9	7	16
50-54 years	48	89	137	34	63	97	13	26	39	5	7	12	5	17	22	11	13	24
55-59 years	52	73	125	36	41	77	10	18	28	5	8	13	10	9	19	11	6	17
60-64 years	57	47	104	42	32	74	9	5	14	9	11	20	16	7	23	8	9	17
65-69 years	55	49	104	39	32	71	12	6	18	7	18	25	11	4	15	9	4	13
70 years and over	83	79	162	62	54	116	21	12	33	33	25	58	2	5	7	6	12	18
Unascertained	1	3	4	...	2	2	...	...	...	...	...	...	...	...	...	...	2	2
Total	929	924	1853	620	640	1260	281	297	578	120	123	243	90	89	179	129	131	260

No. 4a.

To further this study they are shown under age groups, from fifteen years to seventy and over. Native and Foreign Born.

Foreign-Born																		Nativity unascertained		
Total			Time in Canada before Admission																	
			Under 5 years			5—9 years			10—14 years			15 years and over			Unascertained					
M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
4	1	5	....	....	....	1	....	1	1	...	1	....	...	...	....	...	...	2	1	3
14	5	19	6	2	8	2	1	3	1	2	3	3	...	3	2	...	2	....	...	...
26	25	51	13	9	22	4	2	6	2	...	2	4	9	13	3	3	6	....	2	2
31	17	48	11	6	17	5	1	6	5	...	5	6	4	10	4	6	10	....	...	...
51	27	78	13	5	18	9	5	14	6	4	10	10	11	21	13	2	15	....	...	...
40	29	69	6	4	10	7	7	14	4	1	5	16	12	28	7	5	12	....	...	...
31	35	66	3	5	8	1	2	3	6	3	9	14	22	36	7	3	10	....	...	...
29	29	58	3	4	7	1	3	4	1	3	4	19	12	31	5	5	10	....	2	2
14	26	40	1	....	1	2	3	5	1	1	2	7	16	23	3	6	9	....	...	...
16	32	48	1	1	2	1	2	3	1	1	2	10	17	27	3	9	12	....	2	2
15	15	30	....	....	....	2	....	2	1	...	1	7	10	17	5	4	9	....	1	1
16	17	33	....	....	....	2	....	2	2	...	2	8	9	17	3	8	11	1	...	1
21	25	46	....	1	1	....	2	2	1	1	2	12	10	22	8	10	18	....	1	1
1	1	2	....	....	....	....	....	...	....	...	...	....	...	...	....	1	1	1	...	1
309	284	593	57	37	94	37	28	65	32	16	48	116	132	248	63	62	125	4	9	13

TABLE No. 5

Permits of a very interesting study of the nativity of patients. This table should be of especial interest to all those interested in the immigration problem.

	First Admissions			Readmissions		
	Male	Female	Total	Male	Female	Total
Canada	604	625	1,229	173	159	332
Africa	....	....	....	....	....	....
Australia	3	....	3	....	1	1
Armenia	....	....	....	....	....	....
Bulgaria	1	3	4	....	....	....
Austria	5	3	8	2	....	2
Belgium	2	1	3	....	1	1
Central America	....	....	....	....	....	....
China	5	....	5	....	....	....
Czecho-Slovakia	8	1	9	....	....	....
Denmark	....	1	1	....	1	1
England	108	138	246	28	40	68
Finland	11	8	19	....	....	....
France	4	6	10	....	1	1
Germany	1	5	6	1	3	4
Greece	....	2	2	....	....	....
Holland	....	1	1	....	1	1
Hungary	4	....	4	....	....	....
India	....	....	....	....	....	....
Ireland	26	32	58	3	7	10
Italy	12	6	18	1	1	2
Japan	1	....	1	....	....	....
Jugo-Slavia	1	....	1	1	....	1
Norway	2	1	3	....	....	....
Newfoundland	3	3	6	....	1	1
Poland	24	9	33	1	7	8
Roumania	8	....	8	....	....	....
Russia	17	6	23	2	6	8
Scotland	27	34	61	5	7	12
South America	....	....	....	....	....	....
Spain	....	1	1	....	....	....
Sweden	3	....	3	1	....	1
Switzerland	4	....	4	....	....	....
Turkey	....	....	....	....	3	3
United States	24	16	40	10	4	14
West Indies	2	4	6	....	....	....
Other British Possessions	1	....	1	....	....	....
Other Countries	6	2	8	....	1	1
Unascertained	12	16	28	1	2	3
Total	929	924	1,853	229	246	475

TABLE No. 5a

Covers the Citizenship of the first admissions.

	Citizens by Birth			Citizens by Naturalization			Aliens			Citizenship Unascertained			Citizens of British Birth Outside Canada			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Brockville........	78	57	135	5	6	11	......	2	2	......	......	......	7	9	16	90	74	164
Cobourg..........	......	14	14	......	1	1	......	......	......	......	......	......	......	4	4	......	19	19
Hamilton.........	80	90	170	10	20	30	6	2	8	8	3	11	12	15	27	116	130	246
Kingston.........	53	38	91	7	10	17	......	......	......	......	2	2	......	......	......	60	50	110
London..........	99	114	213	4	......	4	8	7	15	......	1	1	23	27	50	134	149	283
Mimico..........	20	42	62	......	......	......	22	16	38	5	6	11	12	19	31	59	83	142
Orillia...........	70	66	136	1	2	3	1	......	1	1	......	1	......	......	......	73	68	141
Penetanguishene..	10	7	17	......	......	......	......	......	......	......	......	......	......	1	1	10	8	18
Toronto..........	55	58	113	15	1	16	40	17	57	7	2	9	48	59	107	165	137	302
Woodstock.......	18	17	35	......	......	......	1	......	1	......	......	......	1	5	6	20	22	42
Whitby..........	119	122	241	61	33	94	13	25	38	4	4	8	......	......	......	197	184	381
Guelph..........	2	......	2	......	......	......	2	......	2	......	......	......	1	......	1	5	......	5
	604	625	1,229	103	73	176	93	69	162	25	18	43	104	139	243	929	924	1,853

TABLE No. 6

Covers the Psychosis of first admissions. It will be noted that these psychoses are arranged in twenty-two classifications, which are standardized throughout the following tables.

Psychoses	Males	Females	Total	Males	Females	Total
1. Traumatic psychoses				4	1	5
2. Senile psychoses				102	112	214
3. Pscyhoses with cerebral arteriosclerosis				55	51	106
4. General paresis				68	29	97
5. Psychoses with cerebral syphilis				1	4	5
6. Psychoses with Huntington's chorea				2	4	6
7. Psychoses with brain tumor				4		4
8. Psychoses with other brain or nervous diseases, total				16	5	21
(a) Cerebral embolism	2		2			
(b) Paralysis agitans	1		1			
(c) Meningitis, tubercular or other forms						
(d) Multiple sclerosis						
(e) Tabes dorsalis						
(f) Acute chorea						
(g) Other diseases	13	5	18			
9. Alcoholic psychoses, total				20	5	25
(a) Delirium tremens	4		4			
(b) Korsakow's psychosis	1	1	2			
(c) Acute hallucinosis	5		5			
(d) Other types, acute or chronic	10	4	14			
10. Psychoses due to drugs and other exogenous toxins, total				6	5	11
(a) Opium (and derivatives), cocaine bromides, chloral, etc., alone or combined	3	5	8			
(b) Metals, as lead, arsenic						
(c) Gases						
(d) Other exogenous toxins	3		3			
11. Psychoses with pellagra				1		1
12. Psychoses with other somatic diseases, total				22	45	67
(a) Delirium with infectious diseases	2		2			
(b) Post-infectious psychosis	4	3	7			
(c) Exhaustion delirium	6	17	23			
(d) Delirium of unknown origin	1		1			
(e) Cardio-renal diseases						
(f) Diseases of the ductless glands		3	3			
(g) Other diseases or conditions	9	22	31			
13. Manic-depressive psychoses, total				106	121	227
(a) Manic type	30	45	75			
(b) Depressive type	74	68	142			
(c) Other types	2	8	10			
14. Involution melancholia				27	71	98
15. Dementia praecox (schizophrenia)				247	244	491
16. Paranoia and paranoid conditions				12	19	31
17. Epileptic psychoses				29	29	58
18. Psychoneuroses and neuroses, total				6	7	13
(a) Hysterical type		2	2			
(b) Psychasthenic type (anxiety and obsessive forms)	1	2	3			
(c) Neurasthenic type	5	3	8			
(d) Other types						
19. Psychoses with psychopathic personality				5	7	12
20. Psychoses with mental deficiency				53	38	91
21. Undiagnosed psychoses				11	10	21
22. Without psychosis, total				132	117	249
(a) Epilepsy without psychosis	28	32	60			
(b) Alcoholism without psychosis	13		13			
(c) Drug addiction without psychosis	2	2	4			
(d) Psychopathic personality without psychosis	3		3			
(e) Mental deficiency	75	72	147			
(f) Others	11	11	22			
Total				929	924	1,853

TABLE

Furnishes the distribution of the patients in regard to race under the different psychoses. This

Race	Total			Traumatic			Senile			With Cerebral arterio-sclerosis			General Paralysis		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
African	1	2	3	....	....	....	....	....	....	....	....	....	....	....	....
American Indian	3	....	3	....	....	....	....	....	....	....	....	....	....	....	....
Armenian	1	....	1	....	....	....	....	....	....	....	....	....	....	....	....
Bulgarian	3	....	3	....	....	....	....	....	....	....	....	....	....	....	....
Chinese	6	....	6	....	....	....	....	....	....	....	....	....	1	....	1
Dutch and Flemish	4	2	6	....	....	....	....	....	....	....	....	....	....	1	1
East Indian	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
English	281	340	621	2	....	2	36	35	71	16	18	34	23	13	36
Finnish	15	10	25	....	....	....	....	....	....	....	....	....	....	....	....
French	43	26	69	....	1	1	2	4	6	3	1	4	1	2	3
German	14	19	33	....	....	....	1	1	2	....	1	1	2	....	2
Greek	6	3	9	....	....	....	....	....	....	....	....	....	....	....	....
Hebrew	10	4	14	....	....	....	....	1	1	1	....	1	....	....	....
Irish	107	100	207	....	....	....	25	23	48	7	8	15	9	2	11
Italian	13	10	23	....	....	....	1	....	1	....	....	....	3	1	4
Japanese	1	....	1	....	....	....	....	....	....	....	....	....	....	....	....
Roumanian	5	....	5	1	....	1	1	....	1	....	....	....	....	....	....
Russian	35	13	48	....	....	....	....	....	....	....	....	....	3	....	3
Scandinavian	4	3	7	....	....	....	....	....	....	1	....	1	....	....	....
Scotch	80	83	163	1	....	1	19	19	38	7	6	13	6	3	9
Slavonic	21	5	26	....	....	....	....	1	1	....	....	....	....	....	....
Spanish	....	1	1	....	....	....	....	....	....	....	1	1	....	....	....
Syrian	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Turkish	1	....	1	....	....	....	....	....	....	....	....	....	....	....	....
Other Specific Races	65	50	115	....	....	....	1	3	4	....	....	....	4	1	5
Mixed Races	54	89	143	....	....	....	1	7	8	3	3	6	5	....	5
Races Unascertained	159	161	320	....	....	....	15	18	33	17	13	30	11	6	17

No. 7

differs in certain respects from Table No. 5, where the admissions were shown under countries

With cerebral syphilis			With Huntington's chorea			With brain tumor			With other brain or nervous diseases			Alcoholic			Due to drugs and other exogenous toxins			Pellagra		
M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	1	2	3	2	...	2	5	1	6	4	2	6	...	4	4	1	...	1
...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	1	...	1	3	...	3	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...
...	1	1	...	...	...	1	...	1	3	...	3	...	1	1	1	...	1	...	...	...
...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	1	...	1	1	...	1	2	2	4	3	...	3	1	...	1	...	...	...
...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	1	...	1	1	...	1	...	...	...	...	...	...
...	1	1	...	1	1	...	...	...	...	1	1	5	1	6	1	...	1	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	2	2	...	1	1	...	...	...	2	1	3	3	1	4	1	1	2	...	...	...

TABLE No. 7

Furnishes the distribution of the patients in regard to race under the different psychoses. This

RACES	With other somatic diseases			Manic-depressive			Involution melancholia			Dementia praecox			Paranoia and paranoid conditions		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
African	....	....	....	....	1	1	....	....	....	....	1	1	....	....	....
American Indian	....	....	....	....	....	....	....	....	....	2	....	2	....	....	....
Armenian	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Bulgarian	....	....	....	....	1	1	....	....	....	....	1	1	....	1	1
Chinese	....	....	....	2	....	2	....	....	....	2	....	2	....	....	....
Dutch and Flemish	....	....	....	2	....	2	....	1	1	2	....	2	....	....	....
East Indian	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
English	4	19	23	38	48	82	9	26	35	77	88	165	5	11	16
Finnish	....	2	2	4	1	5	1	....	1	7	6	13	1	....	1
French	....	1	1	4	4	8	1	1	2	15	8	23	1	....	1
German	....	....	....	....	2	2	2	3	5	8	6	14	....	2	2
Greek	....	....	....	3	....	3	....	....	....	2	3	5	....	....	....
Hebrew	....	....	....	3	1	4	....	....	....	4	1	5	....	....	....
Irish	5	8	13	15	14	29	3	10	13	20	19	39	1	1	2
Italian	....	....	....	1	3	4	....	....	....	3	1	4	....	....	....
Japanese	....	....	....	1	....	1	....	....	....	....	....	....	....	....	....
Roumanian	1	....	1	....	....	....	....	....	....	1	....	1	....	....	....
Russian	....	....	....	4	2	6	1	....	1	15	4	19	2	....	2
Scandinavian	....	....	....	1	....	1	....	....	....	1	....	1	1	....	1
Scotch	....	3	3	8	12	20	2	9	11	18	15	33	....	....	....
Slavonic	....	....	....	6	1	7	1	....	1	9	1	10	....	1	1
Spanish	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Syrian	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Turkish	....	....	....	....	....	....	....	....	....	1	....	1	....	....	....
Other Specific Races	1	....	1	3	1	4	1	1	2	8	7	15	1	3	4
Mixed Races	6	6	12	2	14	16	3	9	12	16	31	47	....	....	....
Races Unascertained	5	6	11	13	16	29	3	11	14	36	52	88	....	....	....

—CONTINUED

differs in certain respects from Table No. 5, where the admissions were shown under countries.

Epileptic psychoses			Psycho-neuroses and neuroses			With psycho-pathic personality			With mental deficiency			Undiag-nosed psychoses			Without psychosis		
M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
11	13	24	3	2	5	....	3	3	22	13	35	....	3	3	26	39	65
....	1	1	....	....	....	....	....	....	....	....	....	....	....	....	1	....	1
4	....	4	....	....	....	....	....	....	4	2	6	....	1	1	4	1	5
....	1	1	....	....	....	....	....	....	....	1	1	....	....	....	1	2	3
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	1
....	....	....	....	....	....	....	....	....	1	....	1	....	....	....	....	1	1
4	3	7	....	2	2	1	1	2	2	1	3	2	1	3	8	5	13
....	....	....	....	....	....	....	....	....	....	1	1	1	....	1	3	4	7
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	1
....	....	....	....	....	....	....	....	....	1	....	1	1	....	1	7	7	14
....	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	2	2
2	2	4		2	2	1	1	2	1	4	5	1	....	1	6	5	11
....	....	....	....	....	....	....	....	....	2	....	2	2	1	3	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	1	1	....	....	....	....	....	....	1	....	1	....	....	....	43	33	76
2	3	5	....	....	....	....	1	1	1	1	2	1	....	1	8	10	18
6	4	10	3	1	4	3	1	4	18	5	33	3	4	7	20	8	28

TABLE

This table furnishes an interesting study in regard to the age of the pati

Psychoses	Total			Under 15 Years			15-19 Years			20-24 Years			25-29 Years			30-34 Years		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
1. Traumatic	4	1	5	...	..	...	1	..	1	...	..	...	...	..	...	1	..	1
2. Senile	102	112	214	...	..	...	1	..	1	...	..	...	...	..	...	...	..	...
3. With Cerebral Arteriosclerosis	55	51	106	...	..	...	...	..	...	...	..	...	...	..	...	...	..	...
4. General Paralysis	68	29	97	1	..	1	...	..	...	1	2	3	3	..	3	9	3	12
5. With Cerebral Syphilis	1	4	5	...	..	...	...	..	...	...	..	...	...	..	...	1	..	1
6. With Huntington's Chorea	2	4	6	...	..	...	...	..	...	...	..	...	...	..	...	...	..	...
7. With Brain Tumor	4	...	4	...	..	...	...	..	...	...	..	...	2	..	2	...	..	...
8. With other Brain or Nervous Diseases	16	5	21	...	..	...	...	..	...	1	..	1	2	1	3	2	..	2
9. Alcoholic	20	5	25	...	..	...	...	..	...	...	..	...	3	..	3	3	..	3
10. Due to Drugs and other Exogenous Toxins	6	5	11	...	..	...	...	..	...	1	..	1	...	..	...	...	..	...
11. With Pellagra	1	...	1	...	..	...	...	..	...	...	..	...	...	..	...	1	..	1
12. With other Somatic Diseases	22	45	67	...	..	...	..	1	1	...	5	5	2	..	2	...	5	5
13. Manic-depressive	106	121	227	...	..	...	4	4	8	10	3	13	6	12	18	12	26	38
14. Involution Melancholia	27	71	98	...	..	...	...	..	...	...	..	...	...	..	...	...	..	...
15. Dementia Praecox	247	244	491	...	2	2	18	18	36	42	26	68	49	39	88	52	37	89
16. Paranoia or Paeanoid Conditions	12	19	31	...	..	...	...	..	...	...	..	...	1	..	1	4	1	5
17. Epileptic Psychoses	29	29	58	1	..	2	...	4	4	5	4	9	3	2	5	5	2	7
18. Psychoneuroses and Neuroses	6	7	13	...	..	...	...	..	...	1	..	1	...	1	1	...	1	1
19. With Psychopathic Personality	5	7	12	...	..	...	...	..	...	2	1	3	...	1	1	...	3	3
20. With Mental Deficiency	53	38	91	3	1	4	13	3	16	6	6	12	7	1	8	7	6	13
21. Undiagnosed Psychoses	11	10	21	...	..	...	1	..	1	...	..	...	2	2	4	1	2	3
22. Without Psychoses	132	117	249	57	43	100	25	23	48	14	12	26	7	6	13	6	6	12
Total	929	924	1853	62	47	109	63	53	116	83	59	142	87	65	152	104	92	196

No. 8

ents under the different psychoses.

35-39 Years			40-44 Years			45-49 Years			50-54 Years			55-59 Years			60-64 Years			65-69 Years			70 Years and over			Unascertained		
M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
...	1	1	...	...	...	1	..	1	1	..	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	3	1	4	3	13	16	6	14	20	20	22	42	69	60	129	...	2	2
...	...	...	2	1	3	2	4	6	2	7	9	10	10	20	15	11	26	14	8	22	10	10	20	...	...	...
19	10	29	10	6	16	7	5	12	6	..	6	1	..	1	7	1	8	3	1	4	1	1	2	...	...	...
...	1	1	...	...	...	...	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...
...	...	...	...	2	2	...	...	...	2	2	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	1	..	1	1	..	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	2	..	2	2	1	3	1	1	2	1	..	1	3	1	4	2	1	3	...	...	...	...	...	...
3	1	4	1	1	2	3	2	5	1	..	1	5	1	6	1	..	1	...	...	...	...	...	...	...	...	...
1	2	3	1	..	1	...	1	1	...	1	1	...	1	1	2	..	2	...	...	...	...	...	...	1	..	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	9	9	1	6	7	3	3	6	4	9	13	3	2	5	8	1	9	1	3	4	...	1	1	...	...	...
6	12	18	19	21	40	17	6	23	4	13	17	11	11	22	5	6	11	10	4	14	2	2	4	...	1	1
1	1	2	2	12	14	5	19	24	7	20	27	9	16	25	2	2	4	1	1	2	...	...	...	...	...	...
33	39	72	25	19	44	9	23	32	10	19	29	4	12	16	5	7	12	...	3	3	...	...	...	...	...	...
4	3	7	...	3	3	1	4	5	...	5	5	1	..	1	...	...	...	1	1	2	...	2	2	...	...	...
6	4	10	5	5	10	1	4	5	2	..	2	...	2	2	...	...	...	1	..	1	...	1	1	...	...	...
3	..	3	2	2	4	...	1	1	...	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1	..	1	2	1	3	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...
4	5	9	4	4	8	1	2	3	3	3	6	...	1	1	1	2	3	...	...	...	...	...	...	...	...	...
3	2	5	1	..	1	2	1	3	...	1	1	...	...	...	...	1	1	...	1	1	1	..	1	...	...	...
5	4	9	4	4	8	6	7	13	3	6	9	1	1	2	3	2	5	1	2	3	...	1	1	...	...	...
89	94	183	81	87	168	64	87	151	48	89	137	52	73	125	57	47	104	55	49	104	83	79	162	1	3	4

TABLE No. 9

To those interested in educational work, this table furnishes a study in regard to the degree of education of the first admissions.

Psychoses	Total			Illiterate			Reads and Writes			Common School			High School			University			Unascertained		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
1. Traumatic	4	1	5	....	....	....	2	....	2	1	1	2	....	....	....	....	....	....	1	....	1
2. Senile	102	112	214	7	2	9	26	24	50	55	56	111	4	9	13	1	....	1	9	21	30
3. With Cerebral Arteriosclerosis	55	51	106	5	1	6	11	10	21	31	31	62	3	4	7	3	....	3	2	5	7
4. General Paralysis	68	29	97	5	1	6	20	5	25	29	13	42	9	3	12	3	....	3	2	7	9
5. With Cerebral Syphilis	1	4	5	....	....	....	1	2	3	....	2	2	....	....	....	....	....	....	....	....	....
6. With Huntington's Chorea	2	4	6	....	....	....	2	2	4	....	1	1	....	1	1	....	....	....	....	....	....
7. With Brain Tumor	4	....	4	....	....	....	4	....	4	....	....	....	....	....	....	....	....	....	....	....	....
8. With other Brain or Nervous Diseases	16	5	21	1	1	2	5	1	6	8	3	11	2	....	2	....	....	....	....	....	....
9. Alcoholic	20	5	25	1	....	1	3	3	6	10	1	11	1	1	2	2	....	2	3	....	3
10. Due to Drugs and other Exogenous Toxins	6	5	11	....	....	....	1	2	3	2	1	3	1	2	3	1	....	1	1	....	1
11. With Pellagra	1	....	1	....	....	....	....	....	....	1	....	1	....	....	....	....	....	....	....	....	....
12. With other Somatic Diseases	22	45	67	....	....	....	5	9	14	12	27	39	5	5	10	....	....	....	....	4	4
13. Manic-depressive	106	121	227	4	1	5	31	21	52	56	63	119	7	28	35	....	1	1	8	7	15
14. Involution Melancholia	27	71	98	....	1	1	10	15	25	12	47	59	1	5	6	2	....	2	2	3	5
15. Dementia Praecox	247	244	491	8	12	20	69	36	105	112	141	253	23	41	64	6	1	7	29	13	42
16. Paranoia or paranoid conditions	12	19	31	2	....	2	2	9	11	3	7	10	1	3	4	....	....	....	4	....	4
17. Epileptic Psychoses	29	29	58	6	4	10	4	10	14	15	13	28	3	1	4	....	....	....	1	1	2
18. Psychoneuroses and Neuroses	6	7	13	....	....	....	....	1	1	6	5	11	....	1	1	....	....	....	....	....	....
19. With Psychopathic Personality	5	7	12	....	....	....	1	1	2	2	5	7	2	1	3	....	....	....	....	....	....
20. With Mental Deficiency	53	38	91	17	13	30	20	13	33	12	10	22	....	....	....	....	....	....	4	2	6
21. Undiagnosed Psychoses	11	10	21	....	....	....	2	....	2	6	6	12	....	2	2	2	1	3	1	1	2
22. Without Psychoses	132	117	249	66	57	123	32	30	62	18	22	40	13	4	17	1	....	1	2	4	6
Total	929	924	1853	122	93	215	251	194	445	391	455	846	75	111	186	21	3	24	69	68	137

TABLE No. 10

Shows the environment of first admissions, and should be studied in conjunction with the population figures for the Province, as divided between Urban and Rural.

Psychoses	Total			Urban 2,500 and over			Rural			Unascertained		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
1. Traumatic	4	1	5	4	....	4	....	1	1	....	....	....
2. Senile	102	112	214	59	76	135	43	36	79	....	....	....
3. With Cerebral Arteriosclerosis	55	51	106	35	33	68	20	18	38	....	....	....
4. General Paralysis	68	29	97	53	26	79	14	3	17	1	....	1
5. With Cerebral Syphilis	1	4	5	1	3	4	....	1	1	....	....	....
6. With Huntington's Chorea	2	4	6	....	2	2	2	2	4	....	....	....
7. With Brain Tumor	4	....	4	4	....	4	....	....	....	....	....	....
8. With other Brain or Nervous Diseases	16	5	21	11	1	12	5	4	9	....	....	....
9. Alcoholic	20	5	25	14	5	19	5	....	5	1	....	1
10. Due to Drugs and other Exogenous Toxins	6	5	11	5	4	9	1	1	2	....	....	....
11. With Pellagra	1	....	1	1	....	1	....	....	....	....	....	....
12. With other Somatic Diseases	22	45	67	11	28	39	11	17	28	....	....	....
13. Manic-depressive	106	121	227	70	93	163	36	28	64	....	....	....
14. Involution-Melancholia	27	71	98	15	50	65	12	21	33	....	....	....
15. Dementia Praecox	247	244	491	160	180	340	86	64	150	1	....	1
16. Paranoia or Paranoid Conditions	12	19	31	7	15	22	5	4	9	....	....	....
17. Epileptic Psychoses	29	29	58	20	19	39	9	10	19	....	....	....
18. Psycho neuroses and Neuroses	6	7	13	5	6	11	1	1	2	....	....	....
19. With Psychopathic Personality	5	7	12	5	7	12	....	....	....	....	....	....
20. With Mental Deficiency	53	38	91	36	22	58	17	16	33	....	....	....
21. Undiagnosed Psychoses	11	10	21	8	8	16	3	2	5	....	....	....
22. Without Psychoses	132	117	249	97	90	187	35	27	62	....	....	....
Total	929	924	1853	621	668	1289	305	256	561	3	....	3

TABLE No. 11

Showing the Economical Condition of First Admissions with Principal Psychoses.

Psychoses	Total			Dependent			Living on Daily Earnings			Comfortable. Ample for 4 Months			Unascertained		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
1. Traumatic	4	1	5	...	1	1	3	...	3	1	...	1	...	...	...
2. Senile	102	112	214	32	29	61	27	29	56	42	52	94	1	2	3
3. With Cerebral Ateriosclerosis	55	51	106	12	2	14	12	7	19	31	42	73	...	...	...
4. General Paralysis	68	29	97	21	9	30	25	8	33	21	12	33	1	...	1
5. With Cerebral Syphilis	1	4	5	...	1	1	1	2	3	...	1	1	...	...	...
6. With Huntington's Chorea	2	4	6	...	...	...	1	2	3	1	2	3	...	...	...
7. With Brain Tumor	4	...	4	1	...	1	1	...	1	2	...	2	...	...	...
8. With other Brain or Nervous Diseases	16	5	21	1	1	2	6	1	7	9	3	12	...	...	...
9. Alcoholic	20	5	25	2	1	3	10	2	12	8	2	10	...	...	...
10. Due to Drugs and other Exogenous Toxins	6	5	11	...	3	3	4	1	5	2	1	3	...	...	...
11. Pellagra	1	...	1	1	...	1	...	...	...	...	...	...	...	...	...
12. With other Somatic Diseases	22	45	67	2	7	9	7	16	23	13	21	34	...	1	1
13. Manic-depressive	106	121	227	23	18	41	47	49	96	36	54	90	...	...	...
14. Involution Melancholia	27	71	98	7	5	12	9	31	40	11	35	46	...	...	...
15. Dementia Praecox	247	244	491	59	32	91	129	86	215	56	123	179	3	3	6
16. Paranoia or Paranoid Conditions	12	19	31	4	10	14	7	5	12	1	3	4	...	1	1
17. Epileptic Psychoses	29	29	58	4	10	14	17	11	28	8	8	16	...	...	...
18. Psychoneuroses and Neuroses	6	7	13	...	1	1	2	1	3	4	5	9	...	...	...
19. With Psychopathic Personality	5	7	12	...	1	1	3	1	4	2	5	7	...	...	...
20. With Mental Deficiency	53	38	91	35	19	54	12	9	21	6	9	15	...	1	1
21. Undiagnosed Psychoses	11	10	21	3	...	3	5	2	7	3	8	11	...	...	...
22. Without Psychoses	132	117	249	83	88	171	20	15	35	29	14	43	...	...	...
Total	929	924	1853	290	238	528	348	278	626	286	400	686	5	8	13

TABLE No. 12.

As the use of alcohol as a beverage has always been a controversial subject, the classification of the first admissions under the headings in this table forms an interesting study.

Psychoses	Total			Abstinent			Temperate			Intemperate			Unascertained		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
1. Traumatic	4	1	5	3	1	4	1	...	1	...	...	...	...	...	...
2. Senile	102	112	214	54	82	136	35	21	56	10	2	12	3	7	10
3. With Cerebral Arteriosclerosis	55	51	106	31	44	75	17	7	22	6	...	6	3	...	3
4. General Paralysis	68	29	97	19	19	38	34	7	41	9	3	12	6	...	6
5. With Cerebral Syphilis	1	4	5	...	2	2	...	1	1	...	...	...	1	1	2
6. With Huntington's Chorea	2	4	6	1	2	3	...	2	2	1	...	1	...	...	...
7. With Brain Tumor	4	...	4	2	...	2	2	...	2	...	...	...	...	...	...
8. With other Brain or Nervous Diseases	16	5	21	8	4	12	6	1	7	2	...	2	...	...	...
9. Alcoholic	20	5	25	...	...	....	1	1	2	19	4	23	...	...	...
10. Due to Drugs and other Exogenous Toxins	6	5	11	1	2	3	2	...	2	3	2	5	...	1	1
11. With Pellagra	1	...	1	...	...	....	...	...	...	1	...	1	...	...	...
12. With other Somatic Diseases	22	45	67	8	31	39	11	10	21	2	1	3	1	3	4
13. Manic-depressive	106	121	227	36	94	130	55	21	76	5	4	9	9	3	12
14. Involution Melancholia	27	71	98	14	57	71	10	12	22	2	...	2	1	2	3
15. Dementia Praecox	247	244	491	98	192	290	111	41	152	13	4	17	25	7	32
16. Paranoia or Paranoid Conditions	12	19	31	3	10	13	7	5	12	1	1	2	1	3	4
17. Epileptic Psychoses	29	29	58	17	18	35	9	8	17	2	...	2	1	3	4
18. Psychoneuroses and Neuroses	6	7	13	4	6	10	1	1	2	...	...	...	1	...	1
19. With Psychopathic Personality	5	7	12	3	4	7	2	1	3	1	1	2	...	...	...
20. With Mental Deficiency	53	38	91	28	28	56	12	3	15	3	3	6	10	4	14
21. Undiagnosed Psychoses	11	10	21	2	7	9	7	3	10	2	...	2	...	...	...
22. Without Psychoses	132	117	249	25	47	72	91	67	158	15	1	16	1	2	3
Total	929	924	1853	357	650	1007	412	212	624	97	26	123	63	36	99

TABLE No. 13

Classifies the first admission patients under marital conditions.

Psychoses	Total			Single			Married			Widowed			Separated			Divorced			Unascertained		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
1. Traumatic	4	1	5	2	....	2	2	1	3	....	....	....	....	....	....	....	....	....	....	....	....
2. Senile	102	112	214	14	19	33	57	49	106	29	44	73	2	....	2	....	....	....	....	....	....
3. With cerebral arteriosclerosis	55	51	106	10	7	17	32	32	64	10	11	21	2	1	3	....	....	....	1	....	1
4. General paralysis	68	29	97	17	5	22	45	17	62	5	5	10	1	2	3	....	....	....	....	....	....
5. With cerebral syphilis	1	4	5	1	....	1	....	2	2	....	2	2	....	....	....	....	....	....	....	....	....
6. With Huntington's chorea	2	4	6	....	1	1	2	2	4	....	1	1	....	....	....	....	....	....	....	....	....
7. With brain tumour	4	....	4	2	....	2	2	....	2	....	....	....	....	....	....	....	....	....	....	....	....
8. With other brain or nervous diseases	16	5	21	8	1	9	6	4	10	2	....	2	....	....	....	....	....	....	....	....	....
9. Alcoholic	20	5	25	8	1	9	10	3	13	2	1	3	....	....	....	....	....	....	....	....	....
10. Due to drugs and other exogenous toxins	6	5	11	2	3	5	3	2	5	....	....	....	....	....	....	....	....	....	1	....	1
11. With pellagra	1	....	1	1	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
12. With other somatic diseases	22	45	67	6	6	12	13	32	45	2	6	8	1	1	2	....	....	....	....	....	....
13. Manic-depressive	106	121	227	34	42	76	62	66	128	7	9	16	2	3	5	....	1	1	1	....	1
14. Involution melancholia	27	71	98	3	16	19	22	44	66	2	11	13	....	....	....	....	....	....	....	....	....
15. Dementia praecox	247	244	491	178	120	298	58	109	167	6	12	18	2	3	5	2	....	2	1	....	1
16. Paranoia or paranoid conditions	12	19	31	7	5	12	3	10	13	1	3	4	1	....	1	....	1	1	....	....	....
17. Epileptic psychoses	29	29	58	22	19	41	6	9	15	1	....	1	....	1	1	....	....	....	....	....	....
18. Psychoneuroses and neuroses	6	7	13	2	1	3	3	6	9	....	....	....	....	....	....	....	....	....	1	....	1
19. With psychopathic personality	5	7	12	4	1	5	1	4	5	....	1	1	....	....	....	....	1	1	....	....	....
20. With mental deficiency	53	38	91	49	27	76	3	8	11	....	2	2	1	1	2	....	....	....	....	....	....
21. Undiagnosed psychoses	11	10	21	6	....	6	5	9	14	....	1	1	....	....	....	....	....	....	....	....	....
22. Without psychoses	132	117	249	115	102	217	13	11	24	3	3	6	1	1	2	....	....	....	....	....	....
Total	929	924	1,853	490	375	865	348	420	768	70	112	182	13	13	26	2	3	5	5	....	5

TABLE No. 14.

Is the first and only table dealing with the psychoses of re-admissions. A study of this as compared with the discharges of previous years, will prove interesting.

Psychoses	Males	Females	Total
1. Traumatic Psychoses	1	...	1
2. Senile Psychoses	9	14	23
3. Psychoses with Cerebral Arteriosclerosis	7	9	16
4. General Paralysis	13	2	15
5. Psychoses with Cerebral Syphilis	2	...	2
6. Psychoses with Huntington's Chorea	...	...	...
7. Psychoses with Brain Tumor	...	...	...
8. Psychoses with other Brain or Nervous Diseases	3	1	4
9. Alcoholic Psychoses	7	2	9
10. Psychoses due to Drugs and other Exogenous Toxins	1	1	2
11. Psychoses with Pallegra	...	1	1
12. Psychoses with Somatic Diseases	1	1	2
13. Manic-depressive Psychoses	56	77	133
14. Involution Melancholia	2	2	4
15. Dementia Praecox	77	99	176
16. Paranoia and Paranoid Conditions	1	2	3
17. Epileptic Psychoses	11	8	19
18. Psychoneuroses and Neuroses	4	8	12
19. Psychoses with Psychopathic Personality	1	...	1
20. Psychoses with Mental Deficiency	11	4	15
21. Undiagnosed Psychoses	...	1	1
22. Without Psychoses	22	14	36
Total	229	246	475

TABLE No. 15.

Deals with the discharges of patients under the different psychoses, together with the condition of the patient at the time of discharge. From this table the reader is enabled to compare the recoveries and improvements with the total admissions for the year.

Psychoses	Total			Recovered			Improved			Unimproved		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F	T.
1. Traumatic	3	...	3	3	...	3	...	...	...	...	...	...
2. Senile	25	29	54	3	2	5	20	21	41	2	6	8
3. With Cerebral Arteriosclerosis	25	13	38	6	3	9	17	9	26	2	1	3
4. General Paralysis	28	9	37	3	...	3	24	8	32	1	1	2
5. With Cerebral Syphilis	2	1	3	1	...	1	1	1	2	...	...	...
6. With Huntington's Chorea	1	...	1	...	...	...	1	...	1	...	...	...
7. With Brain Tumour	1	...	1	...	...	...	1	...	1	...	...	...
8. With other Brain or Nervous Diseases	3	1	4	...	...	...	3	1	4	...	...	...
9. Alcoholic	20	5	25	10	4	14	10	...	10	...	1	1
10. Due to Drugs and other Exogenous Toxins	9	4	13	6	4	10	2	...	2	1	...	1
11. With Pallegra	...	...	...	...	...	...	...	...	...	...	...	...
12. With other Somatic Diseases	15	26	41	11	17	28	3	8	11	1	1	2
13. Manic-depressive	139	164	303	75	103	178	60	59	119	4	2	6
14. Involution Melancholia	11	48	59	4	18	22	6	29	35	1	1	2
15. Dementia Parecox	220	203	423	32	46	78	176	142	318	12	15	27
16. Paranoia and other Paranoid Conditions	15	8	23	7	3	10	7	5	12	1	...	1
17. Epileptic Psychoses	23	16	39	3	1	4	10	10	20	10	5	15
18. Psychoneuroses and Neuroses	9	18	27	3	11	14	5	6	11	1	1	2
19. With Psychopathic Personality	3	2	5	1	1	2	2	1	3	...	...	...
20. With Mental Deficiency	21	31	52	2	3	5	14	21	35	5	7	12
21. Undiagnosed Psychoses	6	12	18	2	5	7	4	4	8	...	3	3
22. Without Psychoses	102	55	157	29	8	37	63	36	99	10	11	21
Total	681	645	1326	201	229	430	429	361	790	51	55	106

TABLE

Deals with the deaths in the Institutions during the period covered, and furnishes the psychoses

Causes of Death	Total			Senile			With Cerebral Arterio-sclerosis			General Paralysis			Alcoholic		
	M.	F.	T.	M.	F.	T.	M	F.	T.	M.	F.	T.	M.	F.	T.
I. Epidemic, Endemic and Infectious Diseases:															
Typhoid and paratyphoid fever	2	...	2	...	...	...	...	...	...	...	...	...	...	...	...
Measles	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Influenza	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...
Dysentery	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Erysipelas	...	2	2	...	1	1	...	...	...	...	...	...	...	...	...
Lethargic encephalitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tuberculosis of the respiratory system	44	33	77	3	...	3	1	..	1	...	...	...	...	...	...
Tuberculosis of other organs	1	1	2	...	1	1	...	...	...	...	...	...	...	...	...
Syphilis (non-nervous forms)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Purulent infection, septicaemia	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...
Other infectious diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
II. General Diseases not Included in Class I:															
Cancer and other malignant tumours	20	23	43	2	1	3	...	...	...	...	...	...	...	...	...
Tumour (non-cancerous)	4	1	5	...	...	...	...	...	...	...	...	...	...	...	...
Rheumatism	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pellagra	1	2	3	...	...	...	...	...	...	...	...	...	...	...	...
Diabetes	1	1	2	...	...	...	...	...	...	...	...	...	...	...	...
Alcoholism (acute or chronic)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other general diseases	6	6	12	...	1	1	...	...	...	...	...	...	...	...	...
III. Diseases of the Nervous System:															
Meningitis (non-epidemic)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tabes dorsalis (locomotor ataxia)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other diseases of spinal cord	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cerebral hemorrhage, apoplexy	22	25	47	7	10	17	7	7	14	...	...	...	...	...	...
General paralysis of the insane	31	10	41	...	...	...	...	...	...	31	8	39	...	...	...
Other forms of mental disease	38	30	68	15	13	28	3	..	3	...	...	...	...	...	...
Epilepsy	18	18	36	...	...	...	...	...	...	...	...	...	...	...	...
Chorea	1	2	3	...	...	...	...	...	...	...	...	...	...	...	...
Other diseases of the nervous system	8	10	18	3	2	5	...	...	...	...	...	...	...	...	...
IV. Diseases of the Circulatory System:															
Pericarditis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Endocarditis and myocarditis	45	56	101	13	19	32	6	9	15	...	...	...	...	...	...
Angina pectoris	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other diseases of the heart	11	6	17	5	2	7	1	..	1	...	...	...	...	...	...
Arteriosclerosis	14	12	26	8	6	14	4	1	5	...	...	...	...	...	...
Other diseases of the arteries	2	7	9	...	1	1	...	3	3	...	...	...	...	...	...
Other diseases of the circulatory system	26	29	55	24	23	47	...	...	...	...	...	...	...	...	...
V. Diseases of the Respiratory System:															
Bronchitis	3	2	5	1	1	2	...	...	...	...	...	...	...	...	...
Bronchopneumonia	37	51	88	18	21	39	4	..	4	1	2	3	...	...	...
Lobar penumonia	9	9	18	1	4	5	1	..	1	1	..	1	...	...	...
Pleurisy	1	...	1	1	...	1	...	...	...	...	...	...	...	...	...
Asthma	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...
Other diseases of the respiratory system (tuberculosis excepted)	9	17	26	2	7	9	1	..	1	1	..	1	...	...	...

No. 16

complete information in regard to the cause of death and is further divided under classification.

Manic Depressive			Involution Melancholia			Dementia Praecox			Paranoia and Paranoid Conditions			Epileptic Psychoses			Psycho-neuroses and Neuroses			With Psycho-pathic Person-ality			With Mental Deficiency			All Other Psychose		
M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
2	..	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
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...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
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1	4	5	3	3	6	15	11	26	...	...	...	1	..	1	...	...	...	...	...	...	2	2	4	18	13	31
...	...	...	...	...	...	1	..	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
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...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	4	4	3	1	4	2	2	4	...	...	...	...	1	1	...	...	...	...	...	...	1	..	1	12	14	26
...	1	1	...	...	...	1	..	1	...	...	...	...	...	...	...	...	...	...	...	...	1	..	1	2	..	2
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	2
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	2
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1	..	1	...	1	1	4	2	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	2	3
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	1	5	...	...	...	2	3	5	...	1	1	...	...	...	...	...	...	...	...	...	...	1	1	2	2	4
...	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	5	14	1	6	7	8	6	14	1	..	1	...	...	...	...	...	...	...	...	...	1	..	1	...	...	...
...	...	...	...	...	...	...	1	1	...	...	...	18	17	35	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	1	..	1	...	1	1
1	2	3	...	...	...	3	4	7	...	...	...	...	...	...	...	...	...	...	...	...	1	..	1	...	2	2
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	3	7	...	2	2	13	18	31	1	2	3	...	...	...	...	...	...	...	...	...	...	1	1	8	2	10
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1	2	3	...	...	...	2	1	3	...	...	...	1	..	1	...	...	...	...	...	...	...	1	1	1	..	1
...	2	2	...	...	...	1	2	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	2
...	...	...	...	...	...	...	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	3
...	...	...	...	...	...	...	5	5	...	...	...	1	1	2	...	...	...	...	...	...	...	...	...	1	..	1
1	1	2	...	...	...	1	..	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	6	12	1	3	4	3	15	18	...	...	...	...	2	2	...	...	...	...	...	...	2	2	4	2	..	2
1	1	2	1	..	1	3	3	6	...	1	1	1	..	1	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...
1	2	3	...	...	...	3	5	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	3	4

TABLE

Deals with the deaths in the Institutions during the period covered, and furnishes the psychoses

Causes of Death	Total			Senile			With Cerebral Arterio-sclerosis			General Paralysis			Alcoholic		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
VI. DISEASES OF THE DIGESTIVE SYSTEM:															
Diseases of the pharynx and tonsils															
Ulcer of stomach and duodenum	2	1	3	1		1									
Other diseases of stomach (cancer excepted)															
Diarrhea and enteritis	6	2	8		1	1	1		1						
Appendicitis and typhilitis															
Hernia and intestinal obstruction	2	1	3												
Other diseases of intestines	4	1	5				1		1						
Cirrhosis of liver															
Biliary calculi															
Other diseases of liver															
Other diseases of digestive system (cancer and tuberculosis excepted)															
VII. NON-VENEREAL DISEASES OF GENITO-URINARY SYSTEM AND ANNEXA:															
Nephritis	1		1												
Other diseases of kidneys and annexa		2	2												
Diseases of bladder															
Diseases of prostate	2		2												
Benign tumors of uterus		1	1												
Other diseases of genital organs															
Other diseases of genito-urinary system															
VIII. DISEASES OF THE SKIN AND OF THE CELLULAR TISSUE:															
Gangrene															
Other diseases of skin and annexa															
IX. DISEASES OF THE BONES AND OF THE ORGANS OF LOCOMOTION (tuberculosis and rheumatism excepted)															
X. OTHER DISEASES NOT INCLUDED IN ABOVE GROUPS															
XI. EXTERNAL CAUSES:															
Suicide	3	1	4	1		1									
Homicide															
Accidental poisoning	1		1												
Accidental traumatism															
Other external causes		1	1												
Total	375	366	741	105	114	219	30	20	50	34	10	44			

No. 16—Continued

complete information in regard to the cause of death and is further divided under classification.

Manic Depressive			Involution Melancholia			Dementia Praecox			Paranoia and Paranoid Conditions			Epileptic Psychoses			Psychoneuroses and Neuroses			With Psychopathic Personality			With Mental Deficiency			All Other Psychoses		
M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	1	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1	..	1	1	1	2	2	..	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	..	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1	..	1	...	...	...	1	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1	..	1	...	...	...	2	1	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
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...	...	...	...	...	...	1	..	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	2	..	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
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...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	2	..	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	1	..	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
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35	36	71	12	17	29	72	88	160	2	4	6	22	22	44	...	...	...	...	...	...	9	8	17	54	47	101

TABLE

Shows the age of the patients at the time of death, in groups from under fifteen years

Psychoses	Total			Under 15 Years			15–19 Years			20–24 Years			25–29 Years			30–34 Years		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
1. Traumatic	...	...	...	...	...	...	...	..	..	...	..	..	...	..	..	...	..	..
2. Senile	105	114	219	...	...	...	...	..	..	...	..	..	...	..	..	...	..	..
3. With Cerebral Arteriosclerosis	30	20	50	...	...	...	...	..	..	...	..	..	...	..	..	...	..	..
4. General Paralysis	34	10	44	...	...	...	...	..	..	...	1	1	1	..	1	6	1	7
5. With Cerebral Syphilis	2	...	2	...	...	...	...	..	..	...	..	..	...	..	..	...	..	..
6. With Huntington's Chorea	2	2	4	...	...	...	...	..	..	...	..	..	...	..	..	...	..	..
7. With Brain Tumor	2	...	2	...	...	...	...	..	..	...	..	..	...	..	..	...	..	..
8. With other Brain or Nervous Diseases	6	5	11	...	...	...	...	..	..	...	..	..	...	..	..	...	..	..
9. Alcoholic	...	...	...	...	...	...	...	..	..	...	..	..	...	..	..	...	..	..
10. Due to Drugs and other Exogenous Toxins	2	1	3	...	...	...	...	..	..	...	..	..	...	..	..	...	..	..
11. With Pellagra	1	1	2	...	...	...	...	..	..	...	..	..	...	..	..	1	..	1
12. With other Somatic Diseases	8	14	22	...	...	...	...	..	..	...	2	2	1	..	1	...	..	..
13. Manic-depressive	35	36	71	...	...	...	...	..	..	...	..	..	...	2	2	...	1	1
14. Involution Melancholia	12	17	29	...	...	...	...	..	..	...	..	..	...	..	..	...	..	..
15. Dementia Praecox	72	88	160	...	...	...	1	..	1	2	3	5	4	1	5	9	..	9
16. Paranoia or Paranoid Conditions	2	4	6	...	...	...	...	..	..	...	..	..	...	..	..	...	..	..
17. Epileptic Psychoses	22	22	44	...	...	...	...	..	..	1	1	2	2	3	5	3	2	5
18. Psychoneuroses and Neuroses	...	...	...	...	...	...	...	..	..	...	..	..	...	..	..	...	..	..
19. With Psychopathic Personality	...	...	...	...	...	...	...	..	..	...	..	..	...	..	..	...	..	..
20. With Mental Deficiency	9	8	17	...	...	...	1	..	1	2	..	2	1	1	2	1	1	2
21. Undiagnosed Psychoses	4	1	5	...	...	...	...	..	..	...	..	..	...	1	1	...	..	..
22. Without Psychoses	27	23	50	7	3	10	5	4	9	2	2	4	1	..	1	3	4	7
Total	375	366	741	7	3	10	7	4	11	7	9	16	10	8	18	23	9	32

No. 17.

of age to seventy years and over, and is also divided under principal psychoses.

35–39 Years			40–44 Years			45–49 Years			50–54 Years			55–59 Years			60–64 Years			65–69 Years			70 Years and over			Un-ascer-tained		
M.	F.	T.	M.	F	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
...	..	...	...	..	...	...	..	...	...	..	..	...	..	...	...	..	...	...	..	...	...	...	...	...	..	..
...	..	...	...	..	...	...	..	...	...	1	1	1	5	6	6	4	10	18	20	38	80	84	164	...	..	..
...	..	...	...	..	...	1	..	1	...	2	2	5	7	12	5	2	7	12	4	16	7	5	12	...	..	..
6	3	9	6	3	9	2	1	3	6	..	6	3	..	3	3	1	4	1	..	1	...	...	...	...	..	..
...	..	...	...	..	...	1	..	1	1	..	1	...	..	...	...	..	...	...	..	...	...	...	...	...	..	..
...	..	...	1	..	1	...	..	...	...	..	..	...	1	1	1	1	2	...	..	...	...	...	...	...	..	..
...	..	...	...	..	...	1	..	1	1	..	1	...	..	...	...	..	...	...	..	...	...	...	...	...	..	..
...	..	...	...	..	...	3	..	3	...	1	1	...	1	1	1	2	3	2	1	3	...	...	...	...	..	..
...	..	...	...	..	...	...	..	...	...	..	..	...	..	...	...	..	...	...	..	...	...	...	...	...	..	..
...	..	...	2	..	2	...	..	...	...	1	1	...	..	...	...	..	...	...	..	...	...	...	...	...	..	..
...	..	...	...	..	...	...	1	1	...	..	..	...	..	...	...	..	...	...	..	...	...	...	...	...	..	..
...	2	2	...	2	2	...	1	1	3	2	5	1	3	4	3	..	3	...	1	1	...	...	...	...	1	1
2	3	5	3	3	6	3	3	6	2	4	6	5	2	7	6	3	9	9	4	13	5	11	16	...	..	..
...	1	1	1	3	4	2	4	6	2	3	5	2	2	4	3	1	4	...	1	1	2	2	4	...	..	..
1	6	7	9	6	15	3	11	14	7	10	17	7	6	13	7	12	19	6	15	21	16	18	34	...	..	..
1	..	1	...	..	...	...	..	...	...	1	1	...	1	1	...	1	1	...	..	...	1	1	2	...	..	..
3	1	4	2	1	3	5	2	7	2	4	6	2	1	3	...	2	2	2	3	5	...	2	2	...	..	..
...	..	...	...	..	...	...	..	...	...	..	..	...	..	...	...	..	...	...	..	...	...	...	...	...	..	..
...	..	...	...	..	...	...	..	...	...	..	..	...	..	...	...	..	...	...	..	...	...	...	...	...	..	..
...	1	1	...	..	...	...	1	1	...	..	..	4	..	4	...	2	2	...	2	2	...	...	...	...	..	..
...	..	...	...	..	...	1	..	1	...	..	..	...	..	...	...	..	...	2	..	2	1	...	1	...	..	..
1	1	2	2	3	5	...	1	1	1	2	3	2	1	3	2	..	2	...	..	...	1	2	3	...	..	..
14	18	32	26	21	47	22	25	47	25	31	56	32	30	62	37	31	62	52	51	103	113	125	238	...	1	1

TABLE

Furnishes valuable information in regard to the length of stay in

Psychoses	Total			Less than 1 Month			1–3 Months			4–7 Months			8–12 Months		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
1. Traumatic	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Senile	105	114	219	24	22	46	20	22	42	10	16	26	6	3	9
3. With Cerebral Arteriosclerosis	30	20	50	10	2	12	7	2	9	2	4	6	4	1	5
4. General Paralysis	34	10	44	8	2	10	5	4	9	4	3	7	4	...	4
5. With Cerebral Syphilis	2	...	2	...	...	...	1	...	1	...	...	...	1	...	1
6. With Huntington's Chorea	2	2	4	1	...	1	...	...	...	...	...	...	1	...	1
7. With Brain Tumor	2	...	2	1	...	1	1	...	1	...	...	...	...	...	...
8. With other Brain or Nervous Diseases	6	5	11	3	3	6	2	1	3	...	...	...	1	...	1
9. Alcoholic	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10. Due to Drugs or other Exogenous Toxins	2	1	3	...	1	1	...	...	...	1	...	1	...	...	...
11. With Pellagra	1	1	2	...	1	1	1	...	1	...	...	...	...	...	...
12. With other Somatic Diseases	8	14	22	6	6	12	2	5	7	...	2	2	...	...	...
13. Manic-depressive	35	36	71	8	6	14	3	3	6	1	1	2	1	4	5
14. Involution Melancholia	12	17	29	...	3	3	2	2	4	1	2	3	...	1	1
15. Dementia Praecox	72	88	160	3	5	8	3	2	5	3	3	6	2	2	4
16. Paranoid or Paranoid Conditions	2	4	6	...	...	...	1	...	1	...	...	...	...	...	...
17. Epileptic Psychoses	22	22	44	1	1	2	1	2	3	1	...	1	1	2	3
18. Psychoneuroses and Neuroses	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19. With Psychopathic Personality	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20. With Mental Deficiency	9	8	17	1	...	1	1	...	1	2	1	3	...	...	...
21. Undiagnosed Psychoses	4	1	5	1	...	1	...	...	...	...	1	1	...	...	...
22. Without Psychoses	27	23	50	1	1	2	1	1	2	6	1	7	2	...	2
Total	375	366	741	68	53	121	51	44	95	31	34	65	23	13	36

No. 18.

the various institutions of patients who died during the current year.

1–2 Years			3–4 Years			5–6 Years			7–8 Years			9–10 Years			11–12 Years			13–14 Years			15–19 Years			20 Years and Over		
M.	F.	T.	M.	F.	T.	M.	.F	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	7	21	10	13	23	5	8	13	6	3	9	2	1	3	...	2	2	...	3	3	...	1	1	8	13	21
5	6	11	1	2	3	...	2	2	...	...	...	...	...	...	1	..	1	...	...	...	...	1	1	...	...	...
7	..	7	3	..	3	3	..	3	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	1	1	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	1	..	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	1	4	9	3	12	1	4	5	...	5	5	3	1	4	1	..	1	...	1	1	2	1	3	3	6	9
3	1	4	2	1	3	...	...	...	2	2	4	1	1	2	...	1	1	1	..	1	...	1	1	...	2	2
3	6	9	5	10	15	5	2	7	6	10	16	11	16	27	...	1	1	3	3	6	2	6	8	26	22	48
...	1	1	...	...	...	...	1	1	...	1	1	...	...	...	...	1	1	...	...	...	...	...	...	1	..	1
2	1	3	3	5	8	3	4	7	4	1	5	2	1	3	...	...	...	...	2	2	1	2	3	3	1	4
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1	2	3	1	2	3	2	1	3	...	...	...	...	...	...	1	..	1	...	...	...	...	1	1	...	1	1
...	...	...	...	...	...	...	...	...	1	..	1	...	...	...	...	...	...	...	...	...	2	..	2	...	...	...
8	1	9	2	3	5	2	2	4	1	3	4	...	2	2	...	...	...	...	2	2	1	5	6	3	2	5
46	27	73	37	40	77	21	25	46	20	25	45	19	23	42	3	6	9	4	11	15	8	18	26	44	47	91

TABLE No. 19

Shows the abnormal conditions in relatives of first admissions, classified with reference to principal psychoses.

Psychoses	Total No.	Psychoses	Neuroses	Mental Deficiency	Suicidal Attempts	Psychopathic Personality	Alcohol, Drugs, etc.	Unascertained	Denied
1. Traumatic psychoses.....	5	1	......	......	......	......	......	......	4
2. Senile psychoses.........	214	34	1	3	3	......	2	55	116
3. Psychoses with cerebral arteriosclerosis.......	106	18	5	3	3	......	......	16	61
4. General paralysis........	97	12	4	......	......	......	......	28	53
5. Psychoses with cerebral syphilis.............	5	......	......	......	......	......	......	1	4
6. Psychoses with Huntington's chorea.........	6	2	......	......	......	......	......	1	3
7. Psychoses with brain tumour...............	4	......	......	......	......	......	......	1	3
8. Psychoses with other brain or nervous diseases...	21	4	......	......	......	......	......	2	15
9. Alcoholic psychoses......	25	3	......	......	......	......	2	6	14
10. Psychoses due to drugs and other exogenous toxins..............	11	1	......	2	......	......	2	......	6
11. Psychoses with pellagra..	1	......	......	......	......	......	......	......	1
12. Psychoses with other somatic diseases.....	67	12	3	......	......	......	4	13	35
13. Manic-depressive psychoses..............	227	48	9	3	3	......	6	43	115
14. Involutional melancholia.	98	16	2	2	3	......	1	11	63
15. Dementia praecox (schizophrenia)..........	491	103	19	5	8	......	11	127	218
16. Paranoia or paranoid conditions..............	31	4	......	......	......	......	1	12	14
17. Epileptic psychoses......	58	6	1	6	......	......	1	9	35
18. Psychoneuroses and neuroses...............	13	2	1	1	1	......	......	2	6
19. Psychoses with psychopathic personality....	12	3	1	......	......	......	1	1	6
20. Psychoses with mental deficiency...........	91	30	3	6	1	......	......	15	36
21. Undiagnosed psychoses...	21	1	......	......	......	......	1	4	15
22. Without psychoses......	249	17	1	32	6	......	12	56	125
Total..........	1,853	317	50	63	28	......	44	403	948

TABLE No. 20

To those interested in the matter of the religion of the patients, this table furnishes a classification under the Church headings, for admissions of the year, the total number in residence, and the admissions since the opening of the Hospitals.

Religion	Admissions of Year			In Residence			Admissions Since Opening		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Baptists	59	60	119	234	255	489	1,487	1,655	3,142
Congregationalists	1	....	1	4	5	9	60	54	114
Episcopalians	206	232	438	831	1,005	1,836	7,499	7,482	14,981
Jews	26	28	54	51	74	125	171	172	343
Presbyterians	156	168	324	669	785	1,454	6,450	6,489	12,939
Roman Catholics	305	221	526	1,168	1,009	2,177	8,007	6,955	14,962
United Church	255	320	575	906	1,128	2,034	7,641	8,215	15,856
Other Denominations	161	162	323	523	536	1,059	3,496	2,826	6,322
Unascertained	80	57	137	438	411	849	1,940	1,036	2,976
Total	1,249	1,248	2,497	4,824	5,208	10,032	36,751	34,884	71,635

TABLE No. 21

This table should prove interesting in the study of the vocations of the patients admitted during the current year. It will be noted that the mechanical class has been divided as between outside and inside work.

Occupation	Admitted this year		
	Male	Female	Total
Professional:			
Clergy, military and naval officers, physicians, lawyers, architects, artists, authors, civil engineers, surveyors, etc.	28	1	29
Commercial:			
Bankers, merchants, accountants, clerks, salesmen, stenographers, typewriters, etc.	132	46	178
Agricultural and Pastoral:			
Farmers, gardeners, stockmen, etc.	223	....	223
Mechanics at Outdoor Vocations:			
Railway and stationary engineers, blacksmiths, carpenters, engine fitters, sawyers, painters, police, etc.	88	2	90
Mechanics, etc., at Sedentary Vocations:			
Shoemakers, bookbinders, compositors, weavers, tailors, seamstresses, bakers, factory workers, etc.	75	38	113
Domestic Service:			
Waiters, cooks, servants, etc.	12	220	232
Education and Higher Domestic Duties:			
Governesses, teachers, students, housekeepers, nurses, etc.	23	689	712
Miners, Marine Engineers, Railway Employees, Seamen, etc.	22	....	22
Labourers	400	....	400
No occupation	239	233	472
Unascertained	7	19	26
Total	1,249	1,248	2,497

TABLE No. 22

Showing the Counties and Districts from which Patients have been admitted during the Year, and since Opening of Hospital.

Counties and Districts	Admitted during Year			Admitted since Opening			Warrant Cases						Remaining in Residence		
							Admitted during Year			Admitted since Opening					
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Algoma District	14	13	27	348	258	606	10	9	19	344	254	598	134	122	256
Brant	13	13	26	502	540	1,042	4	......	4	493	527	1,020	74	70	144
Bruce	10	17	27	527	498	1,025	1	2	3	518	483	1,001	70	76	146
Carleton	47	51	98	1,377	1,434	2,811	3	......	3	1,333	1,383	2,716	225	252	477
Cochrane	19	7	26	56	23	79	15	4	19	52	20	72	30	12	42
Dufferin	4	1	5	42	64	106	3	......	3	41	63	104	11	31	42
Dundas	6	2	8	244	217	461	2	......	2	240	215	455	20	15	35
Durham	10	8	18	396	397	793	1	1	2	387	390	777	43	39	82
Elgin	12	13	25	528	517	1,045	......	......	......	516	504	1,020	55	67	122
Essex	36	42	78	753	724	1,477	15	6	21	732	688	1,420	138	155	293
Frontenac	36	25	61	1,089	982	2,071	5	......	5	1,058	957	2,015	86	73	159
Glengarry	6	2	8	281	263	544	......	......	......	275	261	536	35	28	63
Grenville	6	3	9	316	302	618	1	......	1	311	299	610	41	16	57
Grey	18	18	36	668	580	1,248	3	6	9	653	568	1,221	107	88	195
Haldimand	6	10	16	274	258	532	4	5	9	272	253	525	29	29	58
Haliburton	2	......	2	15	18	33	2	......	2	15	18	33	15	7	22
Halton	5	8	13	305	301	606	3	......	3	303	293	596	21	24	45
Hastings	23	16	39	729	687	1,416	4	1	5	710	672	1,382	102	92	194
Huron	11	12	23	645	679	1,324	1	......	1	635	667	1,302	68	70	138
Kenora	4	3	7	26	34	60	3	2	5	25	33	58	9	11	20
Kent	24	12	36	550	534	1,084	7	......	7	533	522	1,055	77	72	149
Lambton	19	24	43	716	622	1,338	1	......	1	698	598	1,296	81	78	159
Lanark	13	19	32	510	499	1,009	......	......	......	497	480	977	67	63	130
Leeds	15	16	31	593	590	1,182	......	......	......	578	574	1,152	51	92	143
Lennox and Addington	12	7	19	382	342	724	......	......	......	370	335	705	45	35	80
Lincoln	16	16	32	480	438	918	1	1	2	465	423	888	65	59	124
Manitoulin	1	4	5	33	29	62	......	3	3	32	28	60	15	13	28

Middlesex	60	69	129	1,816	1,812	3,628	10	4	14	1,766	1,747	3,513	185	242	427
Muskoka District	7	6	13	193	157	350	3	1	4	189	152	341	58	65	123
Nipissing District	17	10	27	348	256	604	12	7	19	343	253	596	64	33	97
Norfolk	6	12	18	292	335	627	3	4	7	289	327	616	30	51	81
Northumberland	17	7	24	513	571	1,084	3	2	5	499	566	1,065	71	77	148
Ontario	27	24	51	753	716	1,469	5	......	5	731	692	1,423	89	73	162
Oxford	24	18	42	653	567	1,220	5	1	6	634	550	1,184	70	77	147
Parry Sound District	16	9	25	190	161	351	4	......	4	178	152	330	37	29	66
Peel	6	11	17	326	383	709	3	......	3	323	372	695	12	36	48
Perth	17	19	36	608	594	1,202	1	......	1	592	575	1,167	72	75	147
Peterborough	21	15	36	456	525	981	12	2	14	447	512	959	66	83	149
Prescott	9	4	13	258	239	497	1	......	1	250	235	485	60	50	110
Prince Edward	4	4	8	208	197	405	......	......	......	209	193	397	25	19	44
Rainy River District	6	7	13	108	64	172	5	4	9	107	61	168	10	15	25
Renfrew	12	7	19	437	456	893	......	......	......	425	449	874	71	76	147
Russell	10	4	14	148	124	272	......	......	......	138	120	258	34	39	73
Simcoe	22	29	51	1,095	956	2,051	4	2	6	1,076	933	2,009	113	122	235
Stormont	8	5	13	394	344	738	......	......	......	386	339	725	35	42	77
Sudbury	16	13	29	118	86	204	14	7	21	116	80	196	31	37	68
Temiskaming	11	11	22	200	103	303	7	3	10	196	95	291	50	27	77
Thunder Bay District	27	19	46	351	244	595	24	14	38	348	239	587	62	60	122
Victoria	13	12	25	499	484	983	7	6	13	493	478	971	40	52	92
Waterloo	15	28	43	554	599	1,153	2	1	3	541	572	1,113	74	110	184
Welland	17	21	38	436	465	901	4	......	4	423	448	871	79	81	160
Wellington	21	27	48	758	778	1,536	3	4	7	740	758	1,498	80	102	182
Wentworth	57	71	128	2,178	2,163	4,341	19	22	41	2,140	2,114	4,254	270	293	563
York	381	419	800	9,322	9,489	18,811	119	53	172	9,060	9,123	18,183	1,284	1,508	2,792
Unascertained	7	1	8	684	194	878	......	......	......	677	193	870	51	26	77
Other Provinces	7	4	11	159	49	208	2	......	2	156	47	203	41	7	48
Total	1,249	1,248	2,497	36,440	34,941	71,381	361	177	538	35,553	33,883	69,436	4,878	5,196	10,074*

*Does not include patients on probation.

ANNUAL DENTAL REPORT

At each hospital a dental clinic is held for acertain number of days each week, and the following table shows the various dental operations carried on at the different hospitals during the year, including Burwash, Guelph and the Mercer Reformatory.

	Brockville, Dr. Woodrow	Cobourg, Dr. Kerr	Hamilton, Dr. Kapple	Kingston, Dr. Renton	London, Dr. Smyth	Mimico, Dr. Hall	Orillia, Dr. Seymour	Penetang, Dr. King	Toronto, Dr. Hodgins	Whitby, Dr. Beaton	Woodstock, Dr. Heath	Burwash, Dr. Brownlee	Guelph, Dr. Wing	Mercer, Dr. Black	Bowmanville, Dr. Bonnycastle	Reception, Dr. Hodgins*	Total
Number of half days..........	47	52	100	98	156	156	246	24	151	146	48	96	36	54	53	20	1,483
Patients examined............	583	672	297	346	607	770	287	75	382	1,321	401	699	62	136	327	92	7,057
Public charge, patients treated..	348	589	297	476	607	593	287	153	1,373	568	401	650	62	461	327	53	7,245
Private charge, patients treated.	1	79	.....	17	......	3	......	......	......	596	......	49	......	3	......	......	748
Extractions..................	480	464	324	307	1,805	564	807	396	790	1,237	181	998	26	157	133	46	8,715
General anaesthetics..........	64	.....	.....	9	......	......	48	5	69	3	......	11	......	......	......	......	209
Local anaesthetics............	......	.....	.....	286	230	......	......	58	257	......	......	......	......	157	......	45	1,033
Amalgum or cement fillings....	159	69	208	287	194	126	461	10	164	192	111	207	33	357	382	14	2,974
Pyorrhea treatments..........	45	12	426	85	504	117	426	38	146	293	67	41	......	......	......	......	2,200
Other treatments............	3	.....	580	679	......	27	182	1	358	133	......	6	13	25	116	8	2,131
Prophylaxis..................	134	558	4	......	9	264	548	......	236	377	44	26	......	8	158	38	2,404
Replacements................	1	1	9	4	3	3	41	......	18	9	7	14	......	......	1	......	111
Dentures repaired............	7	11	18	3	15	39	39	26	12	28	6	9	2	4	48	......	267
Other work..................	35	10	24	444	......	1	37	......	154	15	41	......	9	2	42	......	814

*Clinic opened July—operating four months.

PER CAPITA COST STATEMENT

The foregoing tables have dealt with the various classifications of the patients, but the report would be incomplete without information as to the cost of operations of the various hospitals.

The following table shows the per capita cost of maintaining each patient per day and is shown divided under the different items of expenditure.

Items	Brockville	Cobourg	Hamilton	Kingston	London	Mimico	Orillia	Penetanguishene	Toronto	Whitby	Woodstock
	cents	cents	cents	cents	cents	cents	cents	cents	cents	cents	cents
Medicines	2.06	1.40	1.42	1.98	1.50	1.88	1.39	1.26	1.50	2.18	4.75
Provisions	20.24	17.24	23.10	21.89	19.32	22.31	19.14	18.89	23.71	21.49	20.75
Fuel, light and water	10.88	8.18	15.42	18.34	7.74	12.37	8.81	10.12	11.45	13.69	16.03
Clothing	4.80	4.57	3.50	4.88	4.58	4.50	4.31	4.47	3.88	6.49	1.45
Laundry and cleaning	1.96	1.41	1.38	2.16	2.00	2.88	1.92	1.30	2.76	3.11	2.36
Furniture and furnishings	6.31	5.26	4.10	3.77	4.86	6.70	3.25	2.80	6.38	6.53	4.24
Office expense	.47	.50	.29	.46	.32	.62	.28	.26	.45	.52	.98
Allowances	9.74	7.25	11.74	11.57	6.18	9.97	5.79	6.98	7.81	8.59	10.80
Feed and fodder	5.76	....	4.80	1.80	3.95	.49	2.14	4.42	.14	3.70	10.43
Farm expense	1.90	.71	.94	1.12	1.91	.88	.78	1.60	.36	1.49	4.65
Contingencies	1.81	1.08	1.89	1.44	1.02	1.41	1.26	.50	.97	1.16	2.16
Salaries	61.45	31.93	52.52	58.59	50.91	61.01	39.98	51.36	48.79	45.30	85.01
Total Gross per Capita	127.38	79.53	121.10	128.00	104.29	125.02	89.05	103.96	108.20	114.25	163.61
Less Recoveries	30.06	11.52	39.45	26.45	35.94	32.61	17.37	19.97	26.80	36.81	83.07
Net per Capita Cost	97.32	68.01	81.65	101.55	68.35	92.41	71.68	83.99	81.40	77.44	80.54
Repairs to Buildings Expense	9.39	9.82	20.68	13.74	15.57	48.06	9.60	9.38	14.29	13.26	23.77
Total per Capita Payable by Province	106.71	77.83	102.33	115.29	83.92	140.47	81.28	93.37	95.69	90.70	104.31

Twenty-Third Annual Report

OF THE

GAME AND FISHERIES DEPARTMENT

1929

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TO HIS HONOUR W. D. ROSS, ESQ.,

Lieutenant-Governor of the Province of Ontario.

MAY IT PLEASE YOUR HONOUR:

I have the honour to submit herewith, for the information of Your Honour and the Legislative Assembly, the Twenty-third Annual Report of the Game and Fisheries Department of this Province.

I have the honour to be,

Your Honour's most obedient servant,

C. MCCREA,
Minister of Mines.

Toronto, 1930.

TWENTY-THIRD ANNUAL REPORT

OF THE

Game and Fisheries Department of Ontario

To the Honourable Charles McCrea,
Minister of Mines.

Sir:—I have the honour to place before you this Twenty-third Annual Report of the Department of Game and Fisheries of Ontario, covering the year 1929.

Financial

The subjoined table will show in detail the various sources from which the Department derived its revenue during the fiscal year ending October 31st, 1929.

Revenue for Fiscal Year 1929

ORDINARY			
Game—			
Royalty		$110,091 70	
Licenses—			
Trapping	$51,190 00		
Non-resident hunting	69,380 00		
Deer	64,983 63		
Moose	7,458 00		
Gun	29,032 95		
Fur Dealers	48,112 00		
Fur farmers	7,298 50		
Tanners	200 00		
Cold Storage	155 00		
		277,810 08	
			$387,901 78
Fisheries—			
Royalty		15,765 12	
Licenses—			
Fishing	$112,363 10		
Angling	214,470 25		
		326,833 35	
Sales—Spawn taking		3,377 61	
			345,976 08
General—			
Guides Licenses		$5,862 00	
Fines		15,193 85	
Costs		1,384 29	
Sales—Confiscated Articles, etc		12,321 68	
Rent		3,933 00	
Commission		3,098 55	
		$41,793 37	
Less miscellaneous refunds		715 13	
			41,078 24
Experimental Fur Farm—			
Sale of milk			1 70
			$774,957 80
CAPITAL			
Experimental Fur Farm—			
Sale of Pelts			417 00
			$775,374 80

The following comparative table outlines the annual revenues and expenditures of this Department in each of the past five years, 1925 to 1929, as well as showing the surplus in the years mentioned:

	Revenue	Expenditure	Surplus
1925	$709,455 73	$354,736 09	$354,719 64
1926	682,063 32	399,744 24	282,319 08
1927	721,576 25	492,472 88	229,103 37
1928	733,259 75	518,054 96	215,204 79
1929	775,374 80	607,835 95	167,538 85

It will be observed that the year 1929 continued the succession of annually increasing revenues, but this increase, while constituting a considerable amount in itself, was not sufficient to balance the 1929 increase in expenditure over 1928, consequent upon the enlarging activities of the Department in its different branches, and more particularly as these activities were affected by the work of fish and game propagation and the enforcement of the provisions of the Act and Regulations. As a result we find that the surplus this year is very much reduced in comparison with the surplus of previous years.

STATISTICS

Appended to this report will be found statistical tables showing in detail the varieties and quantities of fry and fingerlings of the various species of fish raised in the several Provincial fish hatcheries; as well as the designation and location of the waters in which such fry and fingerlings have been deposited. In addition there are also statistical tables in connection with the commercial fishing industry, the fur trade and other branches of Departmental work. The figures in all cases have been very carefully prepared and afford most interesting and valuable information.

GAME

Pursuit of the larger native game animals continued its attraction last year, as a perusal of the appended comparative table showing the number of hunting licenses issued during the past five years will indicate.

	1925	1926	1927	1928	1929
Resident Moose	1,291	1,359	1,379	1,371	1,356
Resident Deer	17,034	23,392	21,111	21,867	22,164
Non-resident Hunting	1,581	1,698	2,237	1,721	1,975

In this connection it is interesting to note that reports reaching the Department are to the effect that the majority of these hunters brought their activities for the season to a successful conclusion.

According to reports received from the District Superintendents it appears that deer and moose are more than holding their own in the northern and northwestern portions of the province, while increasing numbers of caribou in those sections would seem to justify the close season on this species which went into effect in 1929.

Ruffed Grouse (*Partridge*).—Apparently, during 1929, conditions showed marked improvement in all sections of the Province and reports are that these birds are to be found in considerably increased numbers.

Sharp-tailed Grouse (*Prairie Hen*).—As in the last annual report, it must be said that these birds are confined to the northwestern section of the Province. Not much change in conditions, though a little improved.

Quail.—This species is confined to the southwestern counties. Reports are that numbers are not sufficient as yet to warrant a regular open season.

Ducks.—Continue to make their appearance in sufficient numbers to make the hunting of them a source of considerable satisfaction to a large number of hunters.

Pheasants (*Ring-necked*).—This species continues to thrive and increase its numbers in the most southerly sections of Ontario and is becoming very popular. The propagation of these birds is carried on at the bird farm at Eugenia and by interested individuals throughout the Province to whom settings of eggs are shipped on application. During 1929, from the Eugenia Bird Farm, some 16,000 eggs were shipped for hatchery purposes, practically 1,100 chicks were raised to maturity, and 1,345 adult birds liberated.

Hungarian Partridge.—Accommodation has been prepared at Normandale to make provision at that point for the propagation of this species along the lines carried on at Eugenia in connection with the ring-necked pheasant. The small supply secured by the Department last year was received too late in the season to obtain results.

FURS

While there was again an increase in the number of pelts on which royalty was paid, accounted for by increase in number of muskrat pelts, generally speaking conditions affecting our fur bearers showed little, if any, improvement. This condition is largely attributable to the intensive trapping carried on in the past, but strict enforcement of present regulations and observance by all concerned of existing close seasons will assist in the re-establishment of our fur-bearing animals.

Bear.—Catch shows a little increase, possibly accounted for by slightly increased prevalence of these naimals.

Beaver.—Catch shows marked decrease. In that section of the Province in which close season prevails there is noticeable improvement in the conditions affecting this species. Restrictions on the taking of beaver are evidently justified.

Fisher.—Apparently holding its own even though catch was somewhat diminished as compared with previous year.

Fox.—The annually diminishing catch is an indication that this animal is decreasing in numbers.

Lynx.—Conditions show no improvement. Becoming scarce throughout the Province.

Marten.—As in the case of lynx, this species is becoming very scarce.

Mink.—Reports are to the effect that numbers of mink are diminishing in practically all sections.

Muskrat.—Remarkable increase in number taken in 1929 as compared with previous year does not correctly indicate conditions. Rather than improving its position numerically, this species is decreasing.

Otter.—Catch practically stationary. Similar remarks as applied to beaver would apply in this case. Otter are very scarce.

Raccoon.—This species is no more than holding its own. Catch remained stationary.

Skunk.—Showing improvement in its position, though there was some decrease in the catch.

Weasel.—One of the few species which shows an improved condition as evidenced by increased catch.

The following table compares for the past six years, pelts of fur-bearing animals, other than those which were ranch-raised, on which royalty was paid:

	1924	1925	1926	1927	1928	1929
Bear	1,399	2,014	1,635	1,472	1,575	1,888
Beaver	50,233	41,364	27,597	20,738	22,040	17,348
Fisher	1,910	1,936	2,618	3,904	5,400	4,343
Fox (Cross)	1,082	2,801	4,175	3,502	4,116	1,606
Fox (Red)	14,695	22,198	30,535	26,112	25,943	14,550
Fox (Silver or Black)	167	433	620	403	646	197
Fox (White)	362	974	226	977	590	16
Fox (not specified)	28	61	165	136	160	132
Lynx	2,332	2,200	3,884	4,568	3,845	1,718
Marten	3,661	3,125	3,177	3,261	3,492	2,738
Mink	82,466	68,138	65,299	37,628	32,009	29,893
Muskrat	533,256	534,739	387,022	469,947	514,161	714,019
Otter	5,096	4,622	4,304	3,168	4,510	4,562
Raccoon	21,976	22,157	21,002	15,958	13,513	13,653
Skunk	58,130	67,100	75,503	59,488	79,442	75,773
Weasel	51,163	34,365	63,599	72,645	79,425	117,053
Wolverine	12	8	11	15	19	6
Total	827,948	814,935	691,372	723,922	790,886	999,495

The value of these pelts to the trapper, amounting to $3,719,582.72, is somewhat below the 1928 figure, though Ontario continues to lead the Provinces of the Dominion as a producer of fur.

In addition to the above, the total of ranch-raised silver and black foxes, dressed or exported, on which no royalty is payable, and which were raised on the licensed fur farms of the Province, was 5,767; 4,610 of which were exported, and the balance of 1,157 were dressed in the Province. These pelts had a value of $537,311.39.

FUR FARMING

A reference to the subjoined table giving the numbers of fur farming licenses issued by the Department annually for the past five years, will show that activities in this connection during 1929 continued to extend, and as the interest of the individual fur farmer becomes more firmly established the success obtained in the raising of fur-bearing animals in captivity or semi-captivity is more assured. Every fur-bearer, native of the Province, is now included in the list of animals being propagated on these farms.

Fur farmers' licenses issued by the Department during the past five years are as follows:

1925	1926	1927	1928	1929
624	783	986	1,148	1,360

ANIMALS STOCKED ON LICENSED FARMS AT DECEMBER 31ST

	1925	1926	1927	1928	1929
Beaver	29	100	142	98	93
Fisher	2	28	48	54	67
Fitch	......	....	....	....	3
Fox (Cross)	459	397	444	353	385
Fox (Red)	725	397	314	365	489
Fox (Silver Black)	4,940	7,095	9,664	12,555	16,457
Fox (Blue)	40	49	56	60	107
Lynx	2	3	2	6	5
Mink	136	468	826	1,247	3,068
Muskrat	7,182	....	1,107	2,016	2,163
Otter	......	....	....	....	2
Raccoon	306	290	619	831	1,337
Skunk	100	49	91	62	22
Bear	13	4	7	13	13
Marten	2	7	21	20	0
Weasel (Ermine)	....	....	4	2	37
Badger	....	....	....	4	....
Total	13,936	*8,887	†13,345	†17,686	†24,255

*Exclusive of Muskrat.
†Exclusive of muskrat and beaver in semi-captivity.

EXPERIMENTAL FUR FARM

Considerable progress was made during the year 1929 in the various lines of activity carried on at the Experimental Fur Farm. Silver fox, cross fox and red fox, beaver, raccoon, mink and skunk were all successfully bred and raised to maturity. The beaver are among the first reported to be bred in captivity. The wild life at large on the Farm, including red deer, Canada geese and wild ducks, also reared young.

The Farm this year was in the position to pelt for revenue fifty-seven foxes and thirty-nine raccoon, the maximum number of these animals which is considered desirable to keep for breeding stock having been retained. Fifty pairs of foxes, including red, white, silver and cross fox, are on hand. Raccoon, at present, pelt prices, would not appear to be a profitable branch of fur farming. Feed costs and overhead expenses assimilating any profit from the sale of pelts.

Mink raising is attracting wide-spread attention from all parts of the Dominion and is rapidly becoming one of the major branches of research work.

During the year two pair of Marten were added to the stock and will be studied in regard to their breeding habits and nutritional requirements.

Many enquiries are received in connection with muskrats, both for the pen and enclosed area type of farming. At the present time, the Farm is not in a position to encourage the pen farming of muskrats. Heavy losses in breeding stock having been met with due to parasitic infections, which are very commonly found in muskrats in the vicinity of the Fur Farm. The enclosed marsh is still purely a speculative enterprise, and if overcrowding of the animals takes place, disease can be expected to take a serious toll of the muskrat population.

While the initial construction work connected with the Farm is completed, additional fox and mink pens were built to accommodate the increase in young. It was also found necessary to extend the laboratory facilities in order to meet the ever-increasing demand for advanced research with the diseases of fur-bearing animals. An exhibition pen and look-out tower were built at the entrance to the Farm. The pen contains one specimen of animal of each variety kept, so that the general public, other than fur farmers, may have an opportunity of observing them and becoming familiar with their characteristics.

In-breeding experiments from previous years were carried on with silver foxes. It has been found that where brother and sister were mated together for the third generation there was a decided decline in prolificacy; the number of pups per litter showing a distinct decrease from year to year. On the other hand, line-breeding, mother to son, father to daughter, produced exceptionally high quality pups.

Interesting but not conclusive results were obtained in the breeding of cross foxes. With red females mated to silver black males variable results were obtained. In some cases the progeny were well marked high class cross fox, in others the progeny were either red or pointed. In this connection one valuable observation has been made, namely, that cross fox trapped in the open invariably produce pups with the cross marking when mated either with silvers or red foxes. It may be possible through the use of these foxes to establish a true breeding strain of fox. These experiments are being carried on and it is hoped to establish definite data in this respect within a few years.

Breeding experiments with mink were confined to general observations on their habits and the most satisfactory method of handling them during the breeding season. The polygamous system, whereby the male is introduced to the female daily until she breeds, is considered more satisfactory than pairing them off for the season. Not only can fewer males be kept but definite data can be obtained on the breeding qualities of both the male and female. One vigorous male mink can mate at least with four females. Some males are timid and are frightened if the female is at all vicious. When the polygamous mating is used such males can be eliminated with a consequently higher percentage of producing females. The gestation period with mink is very irregular, ranging from forty-three to sixty-two days with the stock at the Fur Farm. A number of the females will accept the male from the eighth to the eleventh day after the first mating, consequently it is safer to try them out at this date regardless of whether the first mating was successful or not. The females are excellent mothers, attending to their young with great care, and if properly handled show little fear of the attendant. The breeding season with mink appears to commence on the third of March.

Satisfactory results were obtained with raccoon, thirty-one young were born from five breeding females, one raccoon having a litter of eight. It is necessary to separate the females before the young are born. Raccoons will eat each other's young whenever a chance is provided. One male can be paired off with at least four females during the winter.

Somewhat radical changes from the customary methods of feeding fox pups were made this year. The prevalent idea that fresh meat should be excluded from the diet of the female when she commences to carry feed to her young was entirely disregarded. Under natural conditions the fox would bring into the den, rabbits, mice and other small carnivore. Consequently fresh meat and small bones would constitute the first meals of the young pup. Following this line of reasoning, the standard ration consisting of raw meat or fish, ground bone meal, raw vegetables and cereals was fed through the entire nursing and weaning period to the female. After weaning, the pups were placed on the same ration, with the exception that one egg per day for four pups was added.

The results were highly successful. Not only did the pups develop into strong-boned, well-grown foxes, but there was an entire absence of any intestinal troubles so common among young fox pups, and which officials at the Experimental Fur Farm attribute to the over-feeding of semi-liquid feeds, in the form of cereals and milk and eggs, and a lack of fresh meat.

It was definitely established that an over-abundance of the anti-rachitic vitamins can produce the very trouble that they are given to prevent, viz: ricketts. Eggs, milk and cod oil are all abundant in anti-rachitic substances, and should be fed only in small quantities. Eggs have a putrefactive effect on the intestines of fox pups and should be mixed with solid feeds. Spectacular results were obtained with fox pups suffering from malnutrition through excess feeding of soft feeds when they were placed on the standard ration.

The effect of feeding horse meat during the summer and early fall months was carefully compared with the results obtained with beef and beef offal There was no doubt but that the effect was detrimental to the colour of the pelt. Foxes which in previous years had shown good, clear colour took on a decidedly brown tinge to the fur. It was also noted that when horse meat was discontinued, and the rations consisted mainly of beef offal (such as tripe, beef hearts and liver), there was decided improvement in the colour of the pelt.

No critical feeding experiments were attempted with mink. The animals were fed the standard ration and raised their young with complete success from a nutritional points of view. The young thrived and developed to maturity on the same ration. Future experimenting will take place with mink on the effects of various combinations of feed on the quality of the fur.

Mink farmers are frequently corresponding with the Fur Farm regarding a dietetic condition. This condition is characterized by swellings of the hind legs and profuse urination in the male and female. In all cases the diet is defective, in that it does not contain fresh feed, particularly in the winter months. By the addition of fresh vegetables, such as canned tomatoes, and small quantities of yeast, the disease is overcome.

The investigation of all types of diseases in fur bearing animals takes an important place in the work. Routine examinations of feces, post-mortems, and treatment of sick animals is rapidly growing. During the spring and summer months animals are brought to the Farm daily for a large variety of conditions—parasitic infestations, broken legs, obstetrical operations, wounds and a number of the more common organic diseases, such as penumonia and all classes of gastro-intestinal disturbances. Research on the use of board floors for the eradication of the internal parasites was continued. It was definitely shown that the use of well-drained board-floored pens is of the utmost value in eradicating the lung worm in pups. Pups born from parents both of which are infected with the disease, do not become infected if born on the board floor pen. It has also a noticeable effect on the hook worm, but is not effective against the round worm. The grossest infections of lung and hook worm are found in foxes run on grass-bottomed pens. The grass and loose state of the earth created an ideal environment for the development of the eggs of the parasite to the infective stage. It has been noted that the bladder worm is apparently increasing in Ontario foxes and further work is needed to find a measure to control this menace.

For the first time, two well defined cases of tuberculosis were found in foxes. The fox has always been considered more or less immune to this disease. The internal parasites continue to be the main source of mortality with fur-bearing animals. Practically no animals trapped in the wilds appear to be free from them. Different species have been identified in the fox, mink, lynx, raccoon, fisher, beaver, wolf and muskrat.

The mink is much subject to the Trematode species and no doubt becomes infested through his aquatic habits. Fish and snails are probably the intermediate host of a number of mink parasites. Three different species of Trematodes have been identified in the mink. One new species, the Parametorchis Canadaensis, was discovered at the Fur Farm. This species is found in the gall bladder. The Plagiorchis Proximus is found in the duodenum. A very small Trematode which appears to be related to the salmon poisoning fluke, Nanophyetus Salmincola, is found in the small intestines. A worm of microscopic proportions of the Capillaria sp., and a new species of tapeworm, not as yet named, are also found in the small intestines. Two worms of particular interest, one of the Dioctophyme Renale, and one of the Oslerus, or a related form, have been found in mink. The Dioctophyme Renale inhabits the kidney and causes large deposits of boney substances in that organ. This worm is particularly destructive. The Oslerus infests the pulmonary veins and has a peculiar knot-like structure and seems to adhere firmly to the outer membrane of the vein.

With the muskrat, two types of flukes, intestinal and liver, are very commonly found. The Echinostomum Coalitum infests the intestines and is found in enormous quantities. One interesting parasite infesting the muskrat art larval cestodes, found in the peritoneal cavity of the Taenia sp. The Cysticercus Fascolaris, the larval form of taenia Taeniaeformis, is commonly met with, also H. evaginata.

Ascaris sp. have been identified in the raccoon, also the immature form of the Physaloptera sp.

In the lynx, Toxocaris Mystax, the round worm of the cat, was found.

Two Trematodes, of the species Echinostoma and Hemistomum, were found in the fisher.

Platypsyllus Castoris, a type of parasitic beetle, was removed from beaver.

CROWN GAME PRESERVES

Following is a list giving description, location and area of the Crown Game Preserves in Ontario as at December 31st, 1929:

Crown Game Preserve	Location	Acreage
Abbey Dawn	Frontenac County	300
Anderdon Township	Essex County	1,200
Bobcaygeon	Victoria and Peterborough Counties	1,700
Boyd	York County	300
Caverly	Elgin County	25
Chapleau	Algoma and Sudbury Districts	1,824,000
Chippewa	Thunder Bay District	2,728
Conroy Marsh	Renfrew County	3,300
Darlington	Durham County	298
Dumfries	Waterloo and Brant Counties	25,000
Dundas Marsh	Wentworth County	2,750
Eden	Wellington County	1,470
Eugenia	Grey County	5,200
Falcon	Kenora District	15,000
Glendale	Wentworth County	450
Glen Elm	Halton County	325
Gloucester	Carleton County	200
Hiawatha	Algoma District	160
Hope	Durham County	1,920

Crown Game Preserve	Location	Acreage
Hughes	Bruce County	400
Huron	Huron County	1,000
Innisfree	Simcoe County	400
Iroquois	Manitoulin District	150
Loch Garry	Glengarry County	6,400
Mallard Lake	Grey County	100
Marmora	Hastings County	10,300
Masonville	Middlesex County	6,500
Meadowvale	Peel County	300
Miner	Essex County	1,280
Nipissing	Nipissing District	155,500
Nopiming	Renfrew and Carleton Counties	1,540
Nottawasaga	Simcoe County	1,200
Peasemarsh	Grey County	300
Peel	Peel County	2,400
Proton	Grey County	6,240
Puslinch	Wellington County	704
Richmond	Parry Sound District	56
Rockcliffe Park	Carleton County	500
Shirley Bay	Carleton County	2,700
Silver Lake	Norfolk County	3,100
Southwold	Elgin County	200
Sudbury	Sudbury District	55,000
Superior	Thunder Bay District	575,000
Township 82	Sudbury District	5,760
Toronto Township	Peel County	3,000
Wilder Lake	Grey County	4,000
York	York County	115,000
Total		2,805,856

Of these Crown Game Preserves, the following were established during the year reported upon: Mallard Lake, Caverly, Toronto Township, Abbey Dawn, Rockcliffe Park, Nipissing, Shirley Bay, Proton and Anderdon Township, while the boundaries of the Wilder Lake and Peel preserves which had previously existed were extended. The Pickering Crown Game Preserve, located in the county of Ontario, ceased to exist.

The objects for which these Game Preserves are established are most commendable, and their existence is having a very beneficial effect on conservation and propagation of game animals and birds in the districts in which they are located. The Department regards with satisfaction the general observance of the Regulations in this connection and the increasing interest of the public in the creation of additional Game Preserves in order that the wild life of the Province may be provided with some adequate means of sanctuary for its protection.

Wolf Bounties

During 1929 the Department received applications for the payment of bounty on 3,588 wolves, which it will be noted was considerably less than the number received in the previous year. As usual the large majority of the applications had their origin for animals taken in the extreme northwestern section of the Province.

Comparative Statement of Wolf Skins Received and Bounties Paid

	Timber	Brush	Pups	Total	Bounties
For fiscal year ending October 31st, 1925	831	1,066	21	1,918	$25,465 62
For fiscal year ending October 31st, 1926	1,022	2,690	107	3,819	51,994 42
For fiscal year ending October 31st, 1927	1,041	4,414	59	5,514	82,970 07
For fiscal year ending October 31st, 1928	1,231	4,878	64	6,173	91,297 27
For fiscal year ending October 31st, 1929	1,165	2,389	34	3,588	53,495 13

Enforcement of the Act and Regulations

The enforcement of the provisions and regulations of the Ontario Game and Fisheries Act was performed in a very satisfactory manner by the field officers charged with the work. The service rendered by the District Superintendents and the Overseers under their respective jurisdictions was capably augmented during the Spring and Fall spawning and deer hunting seasons by numerous seasonal overseers appointed for duty during their periods for the better protection of fish and game and enforcement of the Act.

In this connection we would like to make reference to the services along these lines which are rendered by the Deputy Game and Fishery Wardens. Last year there were 265 such appointments granted to public-spirited citizens, interested in the conservation of our wild life and the observance of the legislative provisions and regulations. These Deputy Game Wardens act without remuneration and perform their services in an unselfish manner in order to render whatever help they may to maintain the wild life resources of the Province. In practically all cases their assistance has been valuable in promoting the objects of our legislation.

In 972 cases in which parties were charged with violations of fish and game regulations, convictions were secured. Fines and costs in these cases amounted to $16,949.05.

In 1,102 cases, seizures of goods and equipment were made, which summarized may be set forth as follows:

Pelts	1,942	Fire-arms	331
Deer and Moose hides	10	Gasoline boats	8
Live animals	38	Row boats	14
Fish (lbs.)	5,612	Canoes	4
Gill nets (pieces)	681	Punts	10
(yards)	1,972	Motor cars	7
Dip nets	20	Jack lights and lanterns	13
Hoop nets	12	Deer and Moose	12
Seine nets	18	Venison (lbs.)	400
Pound nets	3	Moose Meat (lbs.)	280
Trap nets	4	Partridges	45
Hooks	3,306	Geese and ducks	54
Grapples and gaffs	4	Pheasants	23
Spears	58	Decoys	125
Rods and lines	80	Frogs legs (lbs.)	25
Traps	1,191	Miscellaneous	62

In accordance with the usual practice, confiscated articles were disposed of by tender at sales which were given publicity through the medium of the press and our district offices, except in those cases in which the confiscated articles were sold to the former owner where the circumstances warranted. The amount received from these sales appears in the statement of revenue which appears at the commencement of this report.

Report of the Fish Culture Branch

During the past year a new branch of the Department of Game and Fisheries, known as the Biological and Fish Culture Branch, was created. This new departure will unify the biological and fish cultural activities of the Department by bringing together the more practical and scientific lines of endeavour so that it may be possible to apply scientific findings or the results of biological inquiries to the fish cultural activities of our hatcheries.

The functions of the Branch pertain to all matters, either directly or indirectly, related to fish culture and the fisheries of Ontario.

The biological field work is done during the summer months when graduates and undergraduates of our provincial universities in good standing, (that is, with the necessary background for fisheries' investigations), may be drawn into the service to work on various fresh water fishery problems. A limited number of qualified men is available each year from the Department of Biology, University of Toronto. Queen's University, Kingston, and the University of Western Ontario, London, are also developing their departments of biology along similar lines and, although available qualified men are scarce at present, each year there is a decided improvement and this is largely due, probably, to the possibilities offered in this line of work. Men who have gained experience with the Department in connection with biological investigations are encouraged to continue the following year or years.

In addition to the permanent staff of the Branch, which consists of a Director, who is also Chief Biologist, a Hatchery Supervisor, or practical fish culturist, and two assistant biologists (temporary appointments), the personnel of the field staff was as follows: Professor J. D. Detwiler, Associate Professor of Zoology, University of Western Ontario, London; Messrs. G. Adams, M.A., Honour Biology and Chemistry, Queen's University, '29; W. H. R. Werner, M.A., Biology, Western University, '29; A. E. Allin, B.A., Biology and Medicine, University of Toronto, '29; S. J. Bochner, B.A., Biology and Medicine, University of Toronto, '29; H. J. Dignan, B.A., Honour Biology, University of Toronto, '29; E. O. Ebersole, B.A., Biology and Chemistry, Queen's University, '29; A. H. Louden, B.A., Biology and Chemistry, Queen's University, '29; D. C. G. MacKay, B.A., Biology, Queen's University, '29; Roy F. Cain, Third year, Biology, University of Toronto; W. L. Dibbon, third year, General Science, University of Toronto; P. L. MacLachlan, third year, Honour Biology and Chemistry, Queen's University; W. R. Cameron, second year, Biology and Medicine, University of Toronto; H. J. Perkin, second year, Physiology and Biochemistry, University of Toronto; J. Savage, second year, Honour Biology, University of Toronto.

Biological Surveys—General:

In order to regulate our game and commercial fishing and to improve the fishing, and after all the only argument which will be instrumental in changing the views opposed to such regulation will be the practical one of more and better fish, it is absolutely necessary for us to know the conditions, (physical, chemical and biological), under which fish of all species live and thrive. The required knowledge is made possible to some extent at least by biological surveys of waters, which give us a clue to the fish best adapted to the waters, according to known criteria, either physical, chemical or biological. Such studies will help to increase our knowledge regarding the most suitable places to plant fish and the means we might adopt to maintain good fishing. The latter necessitates studies regarding size limits, which involve special studies of rate of growth, maturity and spawning conditions.

Furthermore, a knowledge of the entire life history of all species of fish is necessary for the best results in the culture of these species, either naturally or artificially. When we know conditions under which eggs, fry, fingerlings, yearlings and adults live, our problems in connection with fish culture will be much easier than they are to-day. Life history studies form a part of the schedule of studies of fisheries' research departments of our universities.

During the past year the work of the investigators was organized according to districts which are supervised by District Superintendents.

The number of waters investigated in the Province to date from the standpoint of their limnobiology and suitability for fish of various species is as follows:

Biological Surveys of Waters

Algoma	32	Leeds	4	Rainy River	9
Brant	7	Lennox and Addington	7	Renfrew	29
Bruce	30	Lincoln	2	Simcoe	66
Carleton	1	Manitoulin	3	Sudbury	28
Dufferin	5	Middlesex	6	Temiskaming	11
Durham	17	Muskoka	63	Thames Watershed	472
Elgin	7	Nipisisng	21	Thunder Bay	26
Frontenac	43	Norfolk	11	Victoria	10
Glengarry	1	Northumberland	26	Waterloo	14
Grey	28	Ontario	10	Welland	3
Haldimand	1	Oxford	14	Wellington	6
Haliburton	56	Parry Sound	54	Wentworth	4
Halton	12	Peel	4	York	3
Hastings	27	Perth	4	Huron	3
Kenora	11	Peterborough	32		
Lambton	2	Prince Edward	2	Total	1,233
Lanark	6				

The progress made in connection with these surveys may be better understood by the following comparisons:

Year	Number of studied	Number of Investigators
1925	21	1
1926	58	2
1927	233	5
1928	707	9
1929	214	18
	1,233	

The apparent drop between 1928 and 1929 is due to two factors. In the first place 472 waters of the Thames watershed were included in the 1928 total, and in 1929 the waters of the Grand River watershed were omitted, since only meagre and preliminary surveys were made. Furthermore, there has been a development of more specialized study apart from general biological surveys. The more specialized studies are described later. The number of investigators also affected the results, but this does not apply in 1928 and 1929, since groups of two worked together in connection with general biological surveys.

Biological Surveys—Particular:

Lake Erie:

The survey of the eastern end of Lake Erie commenced in 1928, under the joint auspices of the United States Bureau of Fisheries, the New York State Conservation Department, the Buffalo Society of Natural Sciences, the State of Ohio, and the Department of Game and Fisheries of the Province of Ontario, was extended this year to include the entire lake. In this connection the Department supplied a competent investigator, Mr. A. H. Louden, B.A., of Queen's University, Kingston, to study more particularly the fishes of the lake past the larval stages, since studies in connection with prelarval stages were being undertaken by another investigator in connection with the same survey.

Provision was made for liberal facilities in the museum of Natural Sciences at Buffalo, and the "Shearwater," the boat used, was equipped with fairly adequate laboratory facilities, which permitted a great deal of work to be done on board. Mr. Louden studied the post-larval stages of the fish, their distribution and economic importance, both from the marketable standpoint and as food for other fish. Forty-seven different species of fish were identified and eighty-six stomachs of the different species taken were analyzed for food composition.

In a summary at the end of his report Mr. Louden makes the following remarks:

"1. The work of two summers has proven that the lake as a whole is remarkably free from pollution. There are isolated regions, harbours, etc., where pollution does occur, but nowhere in the 'open' lake is objectionable pollution found and the cry of the general populace, that the lake has been polluted by industrial waste, sewage, etc., is absolutely unfounded.

"2. Knowing that the chemistry of Lake Erie is the normal chemistry of lake water, it is not a surprising feature that plankton is prolifically abundant.

"Substantiating the findings of the previous summer and extending them over the entire lake, we found that, while the fish supply has diminished, the food supply has not, and that Lake Erie is easily capable of supporting a much larger fish fauna than now exists.

"3. Why then has there been such a rapid decline in Lake Erie Fisheries?

"Undoubtedly, the trouble can be traced and is still applicable to the fishermen themselves. I have talked with active and retired fishing boat captains in every port on the lake and with their men, and I find that 80 per cent. of them are honest enough to admit that they have themselves to blame. One has but to listen to accurate tales of tons of fish brought in by a single fishing tug, of which only a small percentage ever reached the market, of the wholesale burning of herring in the early days as a source of fertilizer, and of the long-continued practiee of 'capture by any method,' but never think of preservation, to readily see that regardless of its phenomenal productivity, and ideal conditions, Lake Erie was doomed.

"Obviously, the only thing that can save the situation is 'uniform legislative action'."

Uniform Regulations on the Great Lakes:

Regarding uniform regulations on Lake Erie in particular, and the Great Lakes in general, a third Great Lakes Fisheries Conference was held at Lansing, Michigan, December 5th, 1928, in response to a call issued by Governor Fred W. Green. Representatives of the Federal Bureau of Fisheries at Washington, D.C., the States of Illinois, Indiana, Michigan, New York, Ohio, and Wisconsin, the Department of Games and Fisheries of Ontario and the Department of Marine and Fisheries of Canada, met in the executive office at Lansing, Michigan, for the purpose of discussing uniform regulations by lakes for the protection of the fishing industry on the Great Lakes.

The discussion included the following subjects:

Size limits on fish, species of fish protected, closed seasons, mesh of gill nets, mesh of pound nets, methods of measuring mesh, statistics, reversion of legal weight into legal length after satisfactory biological studies, reviews of biological studies for the year.

The outcome of these conferences has been the development of a better understanding among the various states of the United States and the Province of Ontario, since each was in a position to explain its requirements and views. A certain amount of sacrifice is required on the part of all the fishermen involved, if the fishing industry is to be maintained, and the majority, it is believed, recognize this fact.

Long Point Bay, Lake Erie:

In addition to the activities of the Branch in connection with the Lake Erie Fisheries' Survey this year, a temporary fisheries' research laboratory was established at Port Dover, a port of considerable importance from the standpoint of commercial fishing. The field laboratory was established primarily for the purpose of making an intensive study of the limnobiology of Long Point Bay. These studies resulted in the capture and identification of fifty different species of fish inhabiting the bay, their abundance, age, sex, measurements, food, and the general limnology of their habitat. Knowing certain conditions at least, the Department is in a better position to regulate both game and commercial fishing carried on there.

Biological Survey of Trent River Watershed:

One of the field parties spent an entire summer making a biological survey of the chain of lakes included in that part of the Trent Canal System from Lake Simcoe to Lake Ontario as follows: Balsam Lake, Cameron Lake, Sturgeon Lake, Pigeon Lake, Buckhorn Lake, Deer Bay, Upper and Lower Stoney Lake, Clear Lake, Trent River, Crow Bay, and Percy Beach.

From two to five days were spent on each body of water in the chain and during three weeks in September a more intensive study of Stoney Lake was made, especially the upper part.

The general plant of study was similar to that used in limnobiological studies described in the report for 1928.

Grand River Watershed:

A very general survey of the Grand River System was made, as a point of departure for more intensive biological studies next year.

Fishways:

This year a systematic examination of obstructions along many of our water courses was made, in order to determine whether the present fishways are suitable or desirable and what steps should be taken to correct existing conditions injuriously affecting fish life. Before erecting a fishway, the height of the dam or obstruction must be considered, and also the possibility of a suitable location for the same. The standard fishway used by the Department appears, from the observations of our field men to be suitable. The feasibility of a fishway depends not only on the height of the obstruction, whether natural or artificial, but also on the importance and value of the migratory species in the stream. The available spawning and feeding grounds for migratory species, both above and below an obstruction, must be considered also, in determining the desirability of introducing a fishway.

Streams containing rainbow trout should not be obstructed, since they have a tendency to migrate downstream from smaller streams to the deeper portions of rivers, and into larger lakes while immature, but they return to the smaller streams to spawn, hence the necessity of keeping such streams free from obstructions.

On the other hand, providing the upper reaches of a system are well supplied with speckled trout and are separated by an obstruction, natural or otherwise, from the lower warmer reaches containing only coarse fish, it is not feasible to run the risk of infesting the trout waters with the coarser varieties of fish by opening up a fishway through the obstruction.

Fish Measurements:

Considerable work is being done in connection with measurements of fish, particularly commercial varieties, in order to convert "legal weight" into terms of "legal length." It is necessary to take thousands of measurements for each species at different periods of the year, their age, sex, sexual maturity, etc., in order to arrive at a fair and undisputed standard. In this connection, it has been found that a standard length used for a species in one of the Great Lakes or, in one inland lake where commercial fishing is carried on, is not true for the same species of the same age in a different lake. In other words, the rates of growth of the same species differ in different lakes.

Fish Tagging:

Six hundred and thirty-five Lake Erie fish have been tagged including steelhead trout, whiefish, herring, white bass, yellow pickerel, blue pickerel, and small-mouthed black bass, in order to study their movements, distribution and rates of growth.

The tag, which is non-corrosive metal No. 3, is stamped on one side with the letters O.D.G.F. "Ontario Department (of) Game (and) Fisheries" and on the other with a serial number.

During the tagging process, the fish, which is preferably of illegal size, is retained in fresh water in a tank of convenient size in which to work on board boat. The tank has the bottom or sides, or both, marked off in inches and fractions thereof in order that the length of the fish tagged may be easily obtained and also its depth in inches. In order to determine the age of the fish tagged, two or three scales are removed from that portion of the body ventral to the dorsal fin, and the area from which the scales are removed is bathed with a solution of potassium permanganate. The weight of the fish is determined and it is then released.

By means of a circular letter the Canadian fishermen on Lake Erie have been informed regarding the methods to be adopted in making returns to the Department. A few returns have been made, but it is too premature to make a pronouncement regarding the results of these experiments.

Pollution:

Studies in connection with pollution require more specialized and intensive work. During the past year very little was done in this direction excepting investigations of local disturbances at Lindsay, Bridgeport, Owen Sound, and general observations made in the Spanish, Mattagami and Wabigoon rivers, during biological surveys. However, preliminary surveys help appreciably in bringing untoward conditions regarding pollution of our lakes and streams to the notice of the Department and lead to more intensive studies and corrective measures.

Pound-Netting:

The subject of pound-netting, on which there has been considerable discussion and controversy between gill net fishermen on one hand and pound net fishermen on the other, was studied particularly in the vicinity of Rondeau, Lake Erie, where experimental nets with meshes in the backs of the cribs, ranging in size from 1¾ inches to 3¼ inches, have been run throughout the summer. In addition, the methods employed by the fishermen in their operation of pound nets were studied along the entire north shore of the lake.

To be ideal the crib of a pound net should have a mesh sufficiently large to allow all immature fish to escape. Such a condition also reduces the extent to which such fish are handled during the sorting process. It is not unreasonable to believe that if the above conditions are met, the mortality among the immature fish will be greatly reduced. However, it has been found that a large mesh in the crib gills a certain proportion of marketable fish which reduces their value to the fishermen, and that in some instances fish of legal size may escape through the meshes. At least another season's experimentation with nets is necessary before final recommendations can be made regarding the mesh or meshes of netting in the crib, in order to be satisfactory from most, if not from all angles.

Coarse Fish and Hoop Netting:

The advisability of taking coarse fish from our waters requires a lengthy discussion, but an answer to the wholesale destruction of predatory fish resolves itself to this—if these fish are not interdependent with game fish, either directly or indirectly, or exist in such abundant numbers that it appears impossible for game fish to re-establish themselves, a reduction in the number of coarse fish is considered a wise policy. One reason for granting hoop net licenses is to help, theoretically, in maintaining a balance between game fish and coarse fish.

Certain fish like the gar-pike and dog-fish are of little value as food and are known to eat the more useful kinds. However, it is not wise to condemn any species without exact knowledge. An interdependence exists among the different forms of life in lakes or streams, which cannot be overlooked. For example, the species of minnow, namely, the golden shiner (Notemigonus crysoleucas) provides food for the black bass from the time the bass is large enough to eat fish. In fact, this species is used in the culture of bass in the United States, and this year we have made its culture an adjunct to our hatcheries. Nevertheless, if a nest is left unguarded by bass which may wander temporarily from its nest, the golden shiner has been known to approach the nest and eat deposited spawn. This knowledge, however, would not lead us to exterminate the valuable food of the bass which this species of minnow provides. The same principle applies to the value of the immature sucker as good for pike, pickerel and bass.

Considerable criticism has come from anglers in regard to the operation of hoop nets in certain of our waters, and this lead to a study of the effect of hoop-netting on game fish in the waters of the Rideau System and Lake Ontario.

Initial studies have not shown that hoop-netting as such interferes with our game fish before May first, when the latter commence to move into shallow water. These studies were supplemented by statistics collected from hoop net fishermen throughout the Province regarding the composition of the daily catch by species, weight, etc. The information sought was outlined in the Annual Report of the Department of Game and Fisheries for 1928. Although there was some opposition, the assistance rendered by government overseers in explaining the forms and purpose of the information helped considerably to allay any suspicions or fears.

Studies in connection with hoop-netting are being extended to include a study of the spawning period of all species, the interdependence of coarse fish with game fish, and the most satisfactory mesh of netting to use which will protect the fish requiring protection. The ultimate aim of studies along these lines is to serve commercial and game fishing interests compatible with the principles of conservation. Such studies may show where the fishermen may fish with impunity and to advantage.

Hatcheries:

Our hatchery policy is a progressive one and has grown as a result of the need to replenish lakes and streams and in order to supplement the work of nature in maintaining good fishing.

In 1926 the Province had six hatcheries devoted to the propagation of both game and commercial fish, and in that year eight additional hatcheries located in the Province under the control of the Dominion, and used exclusively for the propagation of commercial fish, were taken over. Provincial hatcheries, under provincial jurisdiction, were the first to go into the propagation of game fish intensively. Our holdings now include fifteen hatcheries, all of which may be used for propagation of one or more of the following species—speckled trout, rainbow trout, brown trout, bass, lake trout, pickerel, whitefish, and herring. In addition, temporary hatcheries have been in operation in connection with the artificial propagation of maskinonge.

Fish culture is a highly technical problem. By means of biological studies and experimentation, we are endeavouring by increments to make a careful study of each step in the process from the time the spawn and milt are taken until the fish are liberated in suitable waters. There is, after that, the infinitely important study, namely the question of survival. In this connection, some work was done by Mr. H. C. White, while in the employ of the Biological Board of Canada, and the following significant statements were published in "A Preliminary Report on Trout Investigations in Forbes Brook in 1925 and 1926" in the Contributions to Canadian Biology and Fisheries, 1927, regarding survival and the method of seining for recovering the planted fry.

"Although a survival of only 27.5 per cent. is shown by the experiment on this creek, undoubtedly with improved methods in the planting, a much higher percentage might have been obtained with the same fry.

"In 1926 an attempt was made to expose equal numbers of fry to single classes of enemies or competitors. Four sections of Forbes brook were selected and screened with fine meshed screen. These sections were then seined to remove all the fish, but care had to be taken to conserve as much as possible the natural condition of the stream and the food organisms.

"Seining under such conditions is far more difficult than where it is not necessary to take such precaution, and I think could not be carried out with any degree of thoroughness except in specially favourable portions of a stream."

The entire problem requires considerably more experimentation, both intensively and extensively, under natural conditions or as near to natural conditions as possible for all species of fish handled.

Our own skilled hatchery officers collect spawn to a large extent in suitable fields and their work is carefully organized in advance. Commercial fishermen also collect spawn and are supplied with the necessary equipment and instructions regarding spawning methods, by the managers of hatcheries in the vicinity of the fishing grounds.

This year, a survey was made in regard to the methods used by the various fishermen, in connection with the spawning of whitefish in Lake Erie, and these methods were checked with the actual hatch. The percentage of fertile eggs sent in by each fishery was as follows: 63, 62.5, 53, 45, 75, 40, 50, 7, 39. The 39 per cent. was from fish taken in gill nets and the remainder from pound nets. In almost every case the method of spawning was reflected in the results.

It is relatively an easy matter to rear fish up to the feeding stage, but from the time fish commence to feed trouble begins. It is then that losses commence to be apparent, and in this connection there is no factor apart from the water supply of such importance as food. Trouble in rearing fish, providing the water supply is satisfactory, can be traced to improper diet. Fish culturists are far from reaching a universal agreement regarding what constitutes the most satisfactory diet for trout, but our knowledge is rapidly improving and when biologists, biochemists and physiologists combine to attack the problem, more exact information will be forthcoming. Considerations regarding food supply of fish involve cost, supply available, palatability and the health and vigour produced in the fish. Our own experience has shown that beef liver excells all other fresh meat foods in the diet of small fingerling trout, and that the cheaper products, namely sheep's plucks, pig liver, etc., may be fed satisfactorily to larger fish.

During the summer Professor J. D. Detwiler, Associate Professor of Zoology, University of Western Ontario, commenced a study of the relative importance of fresh meat, fish, and foods of animal and vegetable origin in the diet of trout.

Speckled Trout:

By consulting the records on the distribution of speckled trout for the year, it will be observed that there is a decrease in the total number planted, but by considering the class of fish distributed, the difference is more than compensated for, and this is shown by the following comparison:

SPECKLED TROUT DISTRIBUTION

1928 vs. 1929

	Eyed Eggs	*Fyr*	*Fingerlings* (1 inch to 4½ inches)	*Yearling*	*Adults*
1928................	60,000	475,000	1,134,600	......	200
1929................	30,000	......	1,105,750	28,860	2,572

Furthermore, at the time of writing there is on hand at the Normandale and Mount Pleasant hatcheries a stock of approximately 90,000 yearlings, which is the product of fingerlings retained in rearing ponds from the spring of 1929. Losses among these at the Mount Pleasant hatchery amounted to less than one per cent. and at the Normandale Trout ponds the losses were insginificant.

The location of deep-seated springs in the vicinity of the Mount Pleasant ponds may undoubtedly lead to the possibility of retaining speckled trout in suitably constructed raceways or rearing ponds to the advanced fingerling and yearling stages.

The Fish Culture Branch has experienced a record year as regards the collection of speckled trout eggs. From our collecting field on Lake Nipigon in the neighbourhood of one million eggs were taken. In addition to this over six million eggs were collected from well matured parent fish at Normandale Trout Ponds.

Rainbow Trout:

The distribution of this species for the year amounted to 35,030 fingerlings. At the time of writing there is on hand approximately 19,000 which is the product of fingerlings retained in rearing ponds from the spring of 1929. Losses among these at the Mount Pleasant hatchery amounted to approximately 12 per cent.

The parent stock are provided with a suitable natural pond in the lower waters of Normandale Creek, and a spawning tank has been provided at the inlet to the pond. The water in the lower Normandale hatchery has been found satisfactory for the rearing of rainbow trout to the fingerling stage, but unsatisfactory for speckled trout on account of high summer temperatures.

The Branch anticipates, providing the collection of eggs from our domesticated stock is successful, that more extensive plants of this species may be made in our waters. Their introduction, however, must be carefully controlled.

Brown Trout:

The success in rearing brown trout at Mount Pleasant hatchery is decidedly promising. This foreign species adapts itself to waters having temperatures which are too high for the satisfactory growth and development of speckled trout, and this is probably one reason for the success resulting at Mount Pleasant.

During the year a total of 2,590 adult brown trout were planted in Big Clear Lake, Frontenac; Eagle Lake, Peterborough; Nepahwin Lake, Sudbury; and Muskoka Lake, Muskoka District. The success of the introduction of this foreign species to these waters will be checked closely.

Prior to the development of biological surveys, very few plants of speckled trout were made in the County of Frontenac. Biological surveys, however, have led to experimentation along this line. In 1926 Clear Lake Creek (Kellar's Creek), a tributary of Big Clear Lake, was stocked with 4,000 speckled trout fry, for the first time. Trout were not formerly native to this stream. The original plant in Big Clear Lake Creek was a success and quite a number of legal-sized trout was caught this year. However, the tributary and outlet streams of the lake are more suitable for brown trout on account of the fact that optimum conditions for speckled trout prevail only at the headwaters.

The results of biological surveys carried on by the State of New York, over a period of years, tend to show that it is possible to extend the fishing possibilities in streams by the introduction of brown trout to those sections which are no longer suitable for speckled trout on account of high water temperatures, during the summer months, which are outside the optimum conditions for speckled trout. Brown trout were rarely encountered in streams having temperatures below 65°F. and occurred in greatest abundance in water having a temperature range between 68°F. and 75°F, according to New York surveys on the Genesee River system. It may be possible then to extend the fishing range for trout in many waters in the Province of Ontario for the above reasons. The Fish Culture Branch, however, will not introduce brown trout into waters distinctly suited throughout their entire course for speckled trout, and the introduction of brown trout to our waters will be strictly controlled. The results of a number of plantings will have to be known before we shall be in a position to make a pronouncement regarding a definite stocking policy.

No extensive plants have been made with this species, but with the parent stock on hand and the success of this year's collection of eggs, which was in the neighbourhood of 900,000, more extensive plantings are assured.

Changes in the Kenora Fish Hatchery this year may permit of the rearing of brown trout fry to be distributed in suitable waters in the districts of Kenora and Rainy River. This work, however, is in the experimental stage only since in these districts trout streams are either non-existent or almost negligible.

Maskinonge:

The artificial propagation of maskinonge will be continued, and we expect better success when more spawners and milters are obtainable simultaneously on localized spawning grounds. So far only subsidiary or temporary hatcheries have been operated in the Pigeon River at Omemee, and at the entrance to Sturgeon Lake on the Scugog River.

Small-mouthed Black Bass:

Considering the extent of our holdings, it is not a difficult matter to rear fry, providing we have optimum conditions as regards breeders and temperature, but the successful rearing of bass fry to fingerlings or yearlings is we understand a universal difficulty, so far as output is concerned. Bass cannot be stripped of their eggs and milt in a manner similar to trout, pickerel, maskinonge, etc.; the egg production is small, and the output is small in camparison with the trout.

For the rearing of bass, comparatively large ponds containing the suitable and abundant food staples for fingerlings are necessary, but the cost of constructing and maintaining these ponds is tremendous. Furthermore, the difficulties encountered in securing favourable sites for such developments are manifold. In view of these considerations, it is necessary to view the maintenance of this species from other angles:—

1. *Harvesting from Natural Waters:*

This year the method of harvesting fingerlings and yearlings from suitable bass lakes was undertaken. The lakes tested out were: Four Mile Lake, County of Victoria; Green Lake and Golden Lake, County of Renfrew; Potspoon Lake, County of Frontenac; Trout Lake, District of Sudbury; Herridge Lake, District of Nipissing.

This primary step was taken in order to determine the practicability of closing any or all of the above lakes for the purpose of obtaining supplies of yearling bass for restocking purposes. Developments in this venture take time and considerable field work in advance, in order to locate the most favourable breeding areas, but on the whole this method of restocking appears feasible.

2. *The Lake on the Mountain (Natural Breeding Ground):*

The introduction of parent fish to the Lake on the Mountain has provided the Fish Culture Branch with a small supply of bass fry for cultural purposes, and pending a further development of the pond culture of bass, this lake will undoubtedly be a good source of supply for fry.

3. *Detached Rearing Stations:*

In addition to the common practice of pond culture, the Branch is making preparation for the detached pond method for rearing purposes. A pond of twelve acres in the vicinity of Ingersoll will be in readiness this year for the purpose. The pond is spring-fed, and has all the requirements for bass culture. Further construction is necessary to drain or lower the water into a collecting basin in which the bass fingerlings or yearlings may be collected in a most convenient manner for distribution. When this is done we shall have at least one station from which it is believed good results will be derived.

4. *Closed Season:*

The extension of the closed season for bass from June 15th to July 1st as developed by biological surveys will protect the bass more adequately, particularly in our warmer and more southerly waters. From the standpoint of protection this law is not all inclusive, since it was determined that many bass in the Georgian Bay spawn after July 1st. On the whole, our bass policy is similar in principle to that existing in the State of New York and *when all is said and done, it is believed that in the free waters of the Province natural restocking by bass is the most effective replenishment.*

Lake Trout, Herring, Whitefish and Pickerel:

With the exception of a slight decrease in this year's distribution of pickerel, there was an increased distribution of all the species named above.

Generally speaking, with the exception of lake trout, which may be retained in our hatcheries to fingerling grade, fry of the commercial species, such as whitefish, herring and yellow pickerel are planted. The Fish Culture Branch is not aware of any hatchery on this continent where these species are reared beyond the fry stage. No reason has yet been given why we should not plant fry of commercial species, since no accurate quantitative study of the survival of planted fry of these species has been made. The necessity and economy of rearing these to the fingerling stage has yet to be proven. Life history studies, however, by the fisheries' research departments of our universities for all species mentioned will undoubtedly cast more light on the subject of survival of artificially reared fish, on which there is little or no quantitative knowledge at the present time. The Fish Culture Branch will do everything possible to encourage studies of this nature.

Experiments carried on by the various states of the United States and the Federal Government to rear pickerel, whitefish and herring to the fingerling size have been shown to be impracticable.

Educational Propaganda:

Illustrated addresses pertaining to fish culture in Ontario and ways and means of preserving the fisheries were given by the Director of the Fish Culture Branch in a number of cities and towns of Ontario during the year. An extension of this work is necessary not only for the purpose of explaining the advantages to be gained by fish culture and restocking, but also those derived by preserving forests, purity of streams, and ways of reclaiming streams for trout.

CLOSED WATERS

The following waters are closed to all fishing:

Fox Lake—Kenora, 12 miles from Kenora, in unsurveyed territory.

Beryl Lake—North half of section 26, Twp. Vankoughnet, Algoma.

Trout Lake—Twp. of Cosby, Sudbury.

Herridge Lake—Temiskaming, for bass propagation.

Sucker Lake—Manitoulin Island, Twp. Assiginack, for propagation of bass.

Lake on the Mountain—Glenora, Prince Edward County, for hatchery purposes and bass propagation.

Eagle Lake—Peterborough County, Twp. Anstruther, for brown trout propagation.

The following are examples of special cases where game fish are protected and where fish propagation may be carried on at the discretion of the Department.

(a) Quoting from the conditions governing licensees we have under section 18 the following statement re *Bay of Quinte:*

> "No one shall fish with nets during the months of June, July and August in that portion of the waters of the *Bay of Quinte*, lying westward of a line drawn from Green Point, in the County of Prince Edward, to the eastern limit of the Town of Deseronto, in the County of Hastings. That portion of the Bay of Quinte westward of a line drawn across the bay from Horse Point on the southern shore to the Lehigh Cement Works' wharf opposite on the northern shore to the Belleville Highway Bridge is hereby set apart and reserved for fishing for hatchery purposes."

Section 19 states:

> "No nets shall be set in that portion of the waters of *Georgian Bay* east of a line drawn northwesterly from the most westerly point of Moore's Point; thence northwesterly to the most southwesterly point of Beausolill Island; then continuing northwesterly to Gin Island; to Smooth Island; to Whaleback Beacon; to Eshpadekong Island; to the easterly side of Pine Island; to Phillemore Rock; to Bass Group Islands; to Barbara Rock; to Campbell's Rock; to the most easterly end of Sandy Island; to the westerly side of Pancake Island to the most westerly point of Franklin Island; to Twin Island; to Groundhog Island; to Hang Dog Island; to Champlain Island; to Tie Island; and to the mouth of French River."

In regard to Gill nets authorized for *Lake Nipigon*, one of the conditions reads as follows:

"Gill nets authorized in this license shall not be set, placed or located within 1,000 yards of the mouth of any tributary, river, creek or stream, nor within two miles from Virgin Falls, and no nets shall be set on Speckled Trout spawning grounds or on grounds set aside for the taking of spawn by the Department, viz.: West Bay, Chief Bay, Ombabika Bay, Black Sturgeon Bay, south of Long Point in South Bay, and those waters lying east of a line drawn from one mile west of Poplar Point to one mile west of High Hill River or in other waters as directed."

(b) The following waters are closed to commercial fishing except in the instances noted:

Lake of the Woods—

Sabaskong Bay—(maskinonge sanctuary). The section of the bay from the boundary line of the Township of Mathieu and following a line 20° east of the true north and south.

Lobstick Bay—Closed especially for hatchery purposes. (Whitefish.)

{*Clearwater Bay*—
White Partridge Bay—In this instance the line is drawn across from Zigzag Point south of 105P; thence to I.R., 38*a*.

{*Little Vermilion Lake*—
Pelican Lake—Kenora (near Pelican on the C.N.R.); lake trout and pickerel propagation.

Rainy Lake—Stanjikoming Bay.

Nipigon Bay—Closed permanently. (Lake Superior).

Georgian Bay Waters:

Colpoy's Bay—Closed to commercial fishing permanently. Used for lake trout propagation.

Matchedash Bay—Closed July and August.

Killarney Bay—

McGregor Bay—

Whitefish Bay—

Entrance to the Spanish River—

Echo Lake—Township of Kehoe. Closed for hatchery purposes (pickerel.) Algoma District.

Mitchell's Bay of Lake St. Clair—Closed to commercial fishing during the months of May, June, July, and August.

Inner Bay of Long Point Bay (*Lake Erie*)—Closed to commercial fishing with the exception of seining and hoop netting, which must not be carried on during the spawning season of black bass. Fishing of this nature is prohibited during the months of May, June, July, and August.

Kagawong Lake, Manitou Lake, Mindemoya Lake, Manitoulin Island.

ACKNOWLEDGMENTS

In conclusion, I desire to publicly express my appreciation of the assistance and support which has been rendered to the Department throughout the year.

The members of the staff, both of the inside and outside service, have faithfully and zealously carried out any and all duties which have been allotted to them, and the spirit of loyal co-operation in the performance of the work has at all times been evident.

Our work has been made more pleasant and attractive by reason of the assistance rendered by the transportation companies and Fish and Game Protective Associations, the officers of which organizations having at all times co-operated with the Department in an earnest endeavour to secure a proper observation of the provisions of the Ontario Game and Fisheries Act.

All of which is respectfully submitted.

I am, Sir,

Your obedient servant,

D. McDonald,

Deputy Minister of Game and Fisheries.

APPENDIX No. 1

SPECIES AND QUANTITIES OF FISH PLANTED IN PROVINCIAL WATERS—1929

Speckled Trout Eyed Eggs

Thunder Bay:	Quantity
Moose Lake	7,500
Lower Twin Lake	7,500
Upper Twin Lake	7,500
Anderson Lake	7,500

Speckled Trout Fingerlings

Addington:	
Barnons Creek	2,000
Algoma:	
Trout Lake Inlet	5,000
Moose Lake	5,000
Mongoose Lake	5,000
Spruce Lake	5,000
Loon Lake	5,000
Batchewana River	5,000
Sand River	5,000
Wartz Lake	5,000
Silver Creek	6,000
Driving Creek	1,000
Gull Lake	5,000
Heyden Creek	5,000
Coldwater Creek	1,000
Root River	1,000
Little Carp Creek	1,000
Mountain Lake	5,000
Fish Lake	5,000
Michipicoten River	5,000
Trout Lake	5,000
Spring Creek	10,000
Crystal Lake	5,000
Harmony River	1,000
Mud Creek	1,000
Johnson's Creek	1,000
Bridgeland River	1,000
Hoyle's Creek	1,000
Kent's Creek	1,000
McQueen's Creek	1,000
Cannon Creek	1,000
Dunn's Creek	1,000
Gravel River	1,000
Iron River	1,000
Stokely Creek	1,000
Twin Lakes	1,000
Victoria Creek	1,000
White's Creek	1,000
Brant:	
Spring Lake	50
Artificial Lake	250
Bruce:	
Langside Creek	10,000
Muskrat Creek	10,000
Otter Creek	500
Main Creek	2,000
Durham:	
Cavan Creek	6,000
Tyrone Creek	14,800
Leskard Creek	2,000
Gibson Creek	500
Irwin Farrow's Creek	500
Wm. Hooey's Creek	2,000

Dufferin:	Quantity
Esson's Creek	15,000
Pine River	2,000
Cemetery Creek	250
Ferguson's Spring Creek	500
Johnny Raw's Creek	500
Credit River	51,250
Humber River	3,000
Nottawasaga River	10,000
Elgin:	
Caverly Creek	1,000
Grange Hall Creek	1,000
Frontenac:	
Brule Lake	10,000
Cataraqui Creek	1,000
Beaver Creek	10,000
Black Creek	10,000
Grey:	
Saugeen River	1,000
Rocky Saugeen	2,000
Sydenham River	10,000
Maple Creek	5,000
Swinton Park Creek	5,000
Meadow Creek	5,000
Jamieson's Creek	1,000
Pepper Creek	10,000
Rockside Park Creek	10,000
Caseman's Creek	5,000
Walter's Brook Trout Stream	5,000
Priddle's Spring Creek	1,000
Middle-Wake Stream	1,000
Sullivan Creek	5,000
Huron:	
Middleton Creek	1,000
Johnston's Creek	600
Springhill Creek	1,000
Haliburton:	
Bare Creek	500
Fletcher Lake	2,000
McCue Creek	9,000
Beaver Lake	10,000
Auger Lake	2,000
Black River	1,000
Halton:	
Murray's Creek	3,000
Acton Creek	1,000
Sixteen Mile Creek	10,000
Hastings:	
Rawdon Creek	2,500
Birds Creek	5,000
Colburn's Creek	5,000
Robertson Creek	4,000
Little Papineau Lake	2,000
Cleak's Lake	2,000
Carlton's Creek	2,000
Lambton:	
Hungry Hollow Creek	300
Middlesex:	
Duncrief's Creek	10,000

SPECIES AND QUANTITIES OF FISH PLANTED IN PROVINCIAL WATERS—1929—*Continued.*

Speckled Trout Fingerlings—continued

Manitoulin:	Quantity
Manitou River	10,000
Muskoka:	
Lake Vernon	10,000
Clear Lake	2,000
Bella Lake	5,000
Muskoka River	2,500
Big East River	5,000
Gipsy Bells Creek	10,000
Holinshead Creek	5,000
Black River	1,000
May's Lake	10,000
Fetterley's Creek	5,000
East River	5,000
Goodwin's Creek	5,000
Casselman's Creek	5,000
Black Creek	10,000
Nipissing:	
North River	2,000
Duschesne Creek	20,000
Baske Creek	2,000
Chippewa Creek	3,000
Doran's Creek	1,000
Norfolk:	
Deer Lick	20,000
South Stream	6,500
Hay Creek	500
Northumberland:	
Mutton's Creek	1,200
Allen's Creek	1,000
Baltimore Creek	3,700
Cold Creek	3,000
Dartford Creek	2,000
Dark Creek	700
Piper Creek	500
Burnley Stream	5,000
Philip's Creek	700
Spring Creek	1,000
Dawson Creek	2,000
Hefferman's Creek	1,000
Callahan's Creek	100
Larry's Pond	2,000
Keeler Spring Creek	1,000
Creek in Township of Haldimand	3,700
Ashby's Creek	500
Vardy's Creek	500
Mallery Creek	1,000
Ontario:	
Black Creek	1,000
Smalley's Creek	4,000
Altona Mill Pond	2,000
Bowerman Pond	5,000
Mill Creek	500
Parry Sound:	
Deer Lake	5,000
South Sequin River	10,000
Black Creek	5,000
Murr's Creek	5,000
Barrett's Creek	5,000
Jenkin's Creek	10,000
Thomas Creek	5,000

Peterborough:	Quantity
Ouse River	2,000
Warr's Creek	5,000
Lundy's Creek	1,000
Blizzard's Creek	2,000
Peel:	
Montgomery Creek	5,000
Moffatt Stream	10,000
Renfrew:	
Brennan's Creek	10,000
Albert Lake	5,000
Crozier Creek	2,000
Diamond Lake	5,000
Byers Creek	5,000
Corrigan Creek	10,000
Jesse's Creek	5,000
Dam Lake Creek	5,000
Black's Creek	2,000
Murphy Creek	1,000
Kearney Creek	1,000
Spring Creek	1,000
Mill Creek	10,000
Simcoe:	
Gilmore Creek	500
Black Ash Creek	5,000
Silver Creek (Tp. Nottawasaga and Collingwood)	2,000
Warner's Creek	5,000
Chewett's Creek	1,000
Hawkestone Creek	3,500
Seldom Seen Creek	2,000
Qantaz Creek	2,000
Silver Creek (Tp. Orillia)	2,000
Hospital Reservoir	500
Sudbury:	
Massey Creek	2,000
Rapid River	10,000
Trout Lake Creek	500
Mowat Creek	2,000
Thunder Bay:	
Allen Creek	10,000
Allen Lake	10,000
Silver Lake	10,000
Pearl River	10,000
Six Mile Creek	10,000
Three Mile Creek	10,000
Currant River	10,000
Rees Lake	10,000
McVicar's Creek	15,000
Neebing River	15,000
Coldwater Creek	10,000
Spring Creek	10,000
Deception Lake	15,000
Kowkash River	5,000
Flint River	10,000
Johnson Creek	5,000
Walker's Lake	10,000
Lake Billie	10,000
Timiskaming:	
Black River Tributary	2,000
Watabeag River	6,000
Hudson Creek	2,000

SPECIES AND QUANTITIES OF FISH PLANTED IN PROVINCIAL WATERS—1929—*Continued.*

Speckled Trout Fingerlings—continued

Timiskaming:—*Con.*	Quantity
Metagami	2,000
Bristol Creek	2,000
Croft's Creek	2,000
Shaw's Creek	2,000
Grassy River	2,000
Red Sucker River	2,000
Kamascotia River	2,000
Waterhen Creek	2,000
Fuller's Creek	2,000
Pearl Lake	2,000
Hayden Creek	2,000
Waterloo:	
Erbsville Creek	21,000
Sunfish Lake Creek	2,150
Schantz's Creek	5,000
Bamberg Creek	20,000
Bussard's Stream	5,000
Lautenslager Creek	1,000
Betzner's Creek	2,000
Mill Creek	1,000
Bearinger Creek	2,000
Wilemsburg Stream	2,000
Seagram's Creek	4,000
Wentworth:	
Twelve Mile Creek	5,000
Waterdown Creek	2,000
Wellington:	
Martin's Creek	10,000
Credit River	32,000

Speckled Trout Yearlings

Addington:	
Shibagan Creek	300
Bruce:	
Otter Creek	500
Durham:	
Mill Pond	200
Jamieson Pond	500
Dufferin:	
Credit River	500
Frontenac:	
Shibley's Creek	500
McCausland Lake	500
Grey:	
Holland Lake	2,000
Creek in Township of Egremont	600
Haliburton:	
Sawyer Lake	500
Muskoka:	
Oxtongue Lake	250
Walker's Lake	500
Echo Lake	500
Shoe Lake	100

Nipissing:	Quantity
Four Mile Creek	300
North River	300
Lake Timagami	7,000
Oxford:	
Brooksdale Stream	250
Campbell's Creek	250
Parry Sound:	
South River	500
George's Lake	100
Little East River	500
Peterborough:	
Little Ooze	500
Leary's Creek	100
Peel:	
Coffey's Creek	300
Renfrew:	
Cormac Creek	500
Jack Creek	500
Simcoe:	
Sturgeon River	500
Pretty River	500
Bear Creek	500
Black Creek	500
Rawn's Creek	250
Thunder Bay:	
Nipigon River	5,000
Waterloo:	
Greenfield Spring Creek	300
Lautenslager	500
Moffatt Creek	500
Elmira Creek	500
Wentworth:	
Strabane Creek	500
Dundas Creek	500
McIntyre Creek	250
York:	
Mimico Fountain	10

Speckled Trout Adults

Muskoka:	
Lake of Bays	772
Nipissing:	
Lake Timagami	500
Norfolk:	
Spring Creek Mill Pond	200
Sudbury:	
Ramsay Lake	500
Thunder Bay:	
Nipigon River	500
Wellington:	
Prison Farm Creek	100

SPECIES AND QUANTITIES OF FISH PLANTED IN PROVINCIAL WATERS—1929—*Continued.*

Lake Trout Fry and Fingerlings

Great Lakes:	Quantity
Lake Ontario	5,789,000
Lake Superior	5,272,300
North Channel	400,000
Lake Huron	7,999,000
Algoma:	
Trout Lake (24-R12)	20,000
Big Basswood Lake	20,000
Herman Lake	10,000
Sand Lake	10,000
Carpenter Lake	20,000
McCarroll's Lake	5,000
Cloudy Lake	5,000
Island Lake	20,000
Achigan Lake	20,000
Trout Lake (Aweres)	10,000
Trout Lake (Montgomery)	10,000
Patton Lake	10,000
Frontenac:	
Sharbot Lake	20,000
Crow Lake	10,000
White Lake	15,000
Trout Lake	15,000
Brule Lake	15,000
Canonto Lake	15,000
Mazinawa Lake	15,000
Palmerston Lake	15,000
Haliburton:	
Kashamaganog Lake	15,000
Drag Lake	10,000
Gull Lake	20,000
East Lake	5,000
Mountain Lake	21,000
Hollow Lake	10,000
Kushog Lake	20,000
Halls Lake	15,000
Boskung Lake	25,000
Bare Lake	5,000
Stormy Lake	5,000
Wolf Lake	5,000
Pine Lake	5,000
Maple Lake	15,000
Twelve Mile Lake	10,000
Hastings:	
Papineau Lake	15,000
Little Weslemkoon	10,000
Weslemkoon	15,000
Lake St. Peter	5,000
Eagle Lake	10,000
Salmon Lake	20,000
Island Lake	15,000
Devil Lake	15,000
Lavelle Lake	5,000
Kenora:	
Eagle Lake	100,000
Lanark:	
Silver Lake	10,000
Leeds:	
Charleston Lake	50,000
Rideau Lakes	25,000

Muskoka:	Quantity
Muskoka Lake	10,000
Lake Joseph	10,000
Lake of Bays	50,000
Lake Vernon	15,000
Fairy Lake	15,000
Mary Lake	15,000
Lake Rosseau	10,000
Oxtongue Lake	15,000
Clear Lake	10,000
Skeleton Lake	20,000
Walkers Lake	15,000
Pine Lake	5,000
Nipissing:	
Turtle Lake	10,000
Trout Lake	20,000
Aylen Lake	10,000
Lowell Lake	5,000
Lake Timagami	280,000
Parry Sound:	
Whitefish Lake	15,000
Ahmic Lake	25,000
Clear Lake	15,000
Sugar Lake	5,000
Sand Lake	10,000
Spring Lake	5,000
Maple Lake	5,000
Eagle Lake	5,000
Duck Lake	5,000
Round Lake	5,000
Georgian Bay	3,482,000
Otter Lake	15,000
Lake of Many Islands	5,000
Cariboo Lake	15,000
Little Deer Lake	5,000
Rainy River:	
Straw Hat Lake	5,000
Mercury Lake	5,000
Renfrew:	
Barry's Bay	15,000
Long Lake	15,000
Carson Lake	10,000
Pough Lake	15,000
Diamond Lake	10,000
Clear Lake	10,000
Sudbury:	
Trout Lake	10,000
Ramsay Lake	20,000
Thunder Bay:	
Lake Nipigon	1,375,000
Kashabowie Lake	10,000
Long Lake	20,000
Lac des Mille Lacs	100,000
Cloud Lake	10,000
Sturgeon Lake	50,000
Baril Lake	50,000
Timiskaming:	
Twin Lakes	5,000
Crystal Lake	5,000
Larder Lake	15,000
Fairy Lake	5,000
Pike Lake	5,000

SPECIES AND QUANTITIES OF FISH PLANTED IN PROVINCIAL WATERS—1929—*Continued.*

Lake Trout Fry and Fingerlings—Continued

York:	Quantity
Lake Simcoe	120,000

Pickerel

Addington:	
South Beaver Lake	15,000
White Lake	15,000
Salmon River	10,000
Bay of Quinte	4,350,000
Algoma:	
Echo Lake	1,630,000
White Lake	15,000
Dundas:	
St. Lawrence River	100,000
Frontenac:	
Sharbot Lake	100,000
Crow Lake	50,000
Loughborough Lake	200,000
Long Lake	25,000
Milk Lake	50,000
Fourteen Island Lake	15,000
Silver Lake	10,000
Elbow Lake	10,000
Grey:	
Black Lake	10,000
Grenville:	
Long Reach on Rideau	100,000
Hastings:	
Stoco Lake	100,000
Moira River	50,000
Salmon River	50,000
Kenora:	
Lake Wabigoon	200,000
Lake of the Woods	65,000,000
Eagle Lake	200,000
Tawatinaw Lake	100,000
Stanzhikima Lake	100,000
Sturgeon Lake	50,000
Lambton:	
Sydenham River	50,000
Lake Huron	24,950,000
Lanark:	
Dalhousie Lake	100,000
Christie Lake	150,000
Mississippi River	100,000
Tay River	100,000
Leeds:	
Rideau Lakes	150,000
Bass Lake	50,000
Green's Lake	10,000
Muskoka:	
Muskoka Lake	600,000
Lake Joseph	700,000
Lake Rosseau	700,000
Sparrow Lake	100,000
Muldrew Lake	100,000

Nipissing:	Quantity
Lake Nipissing	5,500,000
Turtle Lake	20,000
Talon Lake	100,000
Pine Lake	20,000
Trout Lake	100,000
Lake Timagami	200,000
Northumberland:	
Trent River	100,000
Ontario:	
Lake St. John	50,000
Parry Sound:	
Mill Lake	50,000
Maganetawan River (Burton)	200,000
Ahmic Lake	100,000
Deep Bay and Wolf Lake	100,000
Commenda Lake	30,000
Pickerel River	100,000
Isabella Lake	100,000
Wilson Lake	50,000
Crane Lake	100,000
Osler's Lake	50,000
Cariboo Lake	50,000
Bat Lake	100,000
Belle Lake	100,000
Healey Lake	100,000
Maganetawan River (Croft)	50,000
Prince Edward:	
Lake Consecon	50,000
Rainy River:	
Rainy Lake	26,300,000
Wasaw Lake	5,000
Renfrew:	
Norway Lake	25,000
Barry's Bay	50,000
Pough Lake	25,000
Russell:	
Castor River	50,000
Simcoe:	
Lake Couchiching	100,000
Severn River	100,000
Gloucester Pool Lake	500,000
Nottawasaga Bay	11,125,000
Sudbury:	
French River	200,000
Birch Lake	50,000
Maple Lake	50,000
Spanish Lake	200,000
Timiskaming:	
Lake Sesekinak	50,000
Lake Abitibi	250,000
Larder Lake	50,000
King Lake	15,000
Margurue Lake	20,000
Diamond Lake	20,000
Fork Lake	20,000

SPECIES AND QUANTITIES OF FISH PLANTED IN PROVINCIAL WATERS—1929—*Continued.*

Pickerel—Continued

	Quantity
Victoria:	
Youngs Lake	15,000
York:	
Lake Simcoe	100,000

Whitefish

	Quantity
Great Lakes:	
Lake Superior	4,654,000
North Channel	9,000,000
Lake Huron	43,500,000
Lake Erie	34,505,000
Lake Ontario	45,000,000
Kenora:	
Lake of the Woods	36,500,000
Eagle Lake	500,000
Tawatinaw Lake	200,000
Stanzhikima Lake	200,000
Parry Sound:	
Georgian Bay	67,300,000
Prince Edward:	
Bay of Quinte	141,950,000
Rainy River:	
Rainy Lake	26,775,000
Thunder Bay:	
Lake Nipigon	16,000,000
Sturgeon Lake	1,000,000

Herring

Great Lakes:	
Lake Erie	8,085,000
Lake Ontario	3,500,000
Haliburton:	
Paudash Lake	100,000
Prince Edward:	
Bay of Quinte	10,995,000

Bass Fry

Addington:	
South Beaver Lake	5,000
White Lake	5,000
Frontenac:	
Clear Lake	5,000
Sydenham Lake	5,000
Green Bay Lake	5,000
Long Lake	5,000
Victoria Lake	5,000
Haliburton:	
Paudash Lake	5,000
Hastings:	
Stoco Lake	5,000
Moira River	5,000
Bass Lake	5,000
North Lake	5,000

Bass Fingerlings

	Quantity
Bruce:	
Cameron Lake	1,000
Elgin:	
Pinafore Lake	1,000
Grey:	
Saugeen River	1,000
Wilcocks Lake	1,000
Kent:	
Mitchell's Bay	1,000
Lambton:	
Sydenham River	1,000
Nipissing:	
Cache Lake	40
Lake Nipissing	2,000
Oxford:	
Horner's Creek	1,000
Parry Sound:	
Ahmic Lake	1,000
Simcoe:	
Gloucester Pool Lake	1,000
Boyne River	1,000
Sudbury:	
Minisinakwa Lake	2,000
Cutler Lake	40
York:	
Lake Simcoe	1,000

Bass Yearlings

Frontenac:	
Sharbot Lake	160
Crow Lake	50
Crotch Lake	50
Silver Lake	50
West Rideau Lake	50
Fishing Lake	30
Hastings:	
Stiner's Lake	30
Lanark:	
Dalhousie Lake	50
Otty Lake	50
Christie Lake	50
Nipissing:	
Cache Lake	25
Northumberland:	
Trent River	60
Prince Edward:	
Consecon Lake	100
Peterborough:	
Stoney Lake	125
Renfrew:	
White Lake	50
Simcoe:	
Lake Couchiching	100

SPECIES AND QUANTITIES OF FISH PLANTED IN PROVINCIAL WATERS—1929—*Continued.*

Base Yearlings—Continued

Victoria:	Quantity
Sturgeon Lake	90
Cameron Lake	125

Bass Adults

Nipissing:	
Cache Lake	35
Sudbury:	
Windy Lake	60
Cutler Lake	50

Rainbow Trout Fingerlings

Halton:	
Bronte Creek	10,000
Simcoe:	
Stoney Creek	5,000
Sudbury:	
Pumphouse Creek	5,000
Geneva Creek	5,000
Windy Creek	10,000

Timiskaming:	Quantity
Hollinger Mine Waters	30

Brown Trout Adults

Frontenac:	
Big Clear Lake	400
Peterborough:	
Eagle Lake	1,000
Muskoka:	
Muskoka Lake	800
Sudbury:	
Nepahwin	390

Maskinonge Fry

Victoria:	
Pigeon River	20,000

TABLE I—DISPOSITION OF APPLICATIONS FOR FISH, 1929

	No. of Applications	No. Filled	No. Cancelled Unsuitable	No. Cancelled Duplicates	No. Suitable	No. Brought Forward to 1930 (Biological Studies Necessary)
Bass	236	51	23	1	137	24
Herring	20	13	...	...	7	...
Lake Trout	230	174	14	2	20	20
Pickerel	154	98	30	3	8	15
Rainbow Trout	20	7	9	...	2	2
Speckled Trout	524	332	63	8	59	62
Whitefish	65	58	...	4	3	...
Brown Trout	8	4	1	0	1	2
Maskinonge	9	1	3	...	4	1
Miscellaneous	2	...	1	...	1	...
	1,268	738	144	18	242	126

TABLE II.—DISTRIBUTION OF

Length of Fish in Inches	Eyed Eggs	Age in			
		3	3½	4	5
	30,000				
1		701,850	8,000		
1½-2				20,000	
2-3				38,000	
2-3½					105,050
2-4½					
2½-3					
3					7,600
3-3½					
3-4					
3-4½					
4					
4-4½					
4½					
4½-6½					
12-20					
	30,000	701,850	8,000	58,000	112,650

TABLE III.—DISTRIBUTION OF FISH ACCORDING TO SPECIES, 1926-1929

	1926	1927	1928	1929
Lake Trout Fry and Fingerlings	8,501,000	21,465,375	22,806,090	26,238,300
Speckled Trout Eyed Eggs				30,000
Speckled Trout Fry and Fingerlings	1,085,300	1,444,050	†1,669,600	*1,105,750
Speckled Trout Yearlings				28,860
Speckled Trout Adult	300	606	200	2,572
Rainbow Trout Fry and Fingerlings	1,800		419	*35,030
Brown Trout Adult				2,590
Black Bass Fry			50,000	60,000
Black Bass Fingerlings	12,500	5,425	10,833	15,080
Black Bass Yearlings				1,245
Black Bass Adults	1,569		90	145
Maskinonge Fry		68,000	53,000	20,000
Pickerel Fry	13,820,000	223,945,000	155,921,750	147,155,000
Whitefish Fry	260,575,000	448,789,750	346,172,000	427,084,000
Herring	11,225,000	18,410,000	17,830,000	22,680,000
	295,222,469	714,128,206	544,513,982	624,458,572

†Including 60,000 eyed eggs.
*Fingerlings only.

Speckled Trout—1929

months				Yearlings	Adults	Total
6	6½	7	7½			
						30,000
						709,850
						20,000
						38,000
29,000						134,050
		53,250	4,900			58,150
	42,000					42,000
2,000	2,000					11,600
2,500						2,500
		2,000				2,000
		10,000				10,000
100						100
73,500						73,500
	4,000					4,000
				28,860		28,860
					2,572	2,572
107,100	48,000	65,250	4,900	28,860	2,572	1,167,182

Table IV.—Number of Shipments

	1928		1929	
Speckled Trout Eyed Eggs	...		4	
Speckled Trout Fry	111		...	
Speckled Trout Fingerlings	166		277	
Speckled Trout Yearlings	...		42	
Speckled Trout Adults	2		9	
	——	279	——	332
Lake Trout		134		174
Pickerel		125		98
Whitefish		50		58
Herring		13		13
Bass Fry	8		13	
Bass Fingerlings	42		14	
Bass Yearlings	...		22	
Bass Adults	3		2	
	——	53	——	51
Maskinonge		2		1
Rainbow Trout Fingerlings		2		7
Brown Trout		...		4
Total number of shipments		658		738

APPENDIX

GAME AND FISHERIES

Statistics of the Fishing Industry in the Public Waters

Equip

No	District	No. of Men	Tugs			Gasoline Launches		Sail and Row Boats		Gill Nets	
			No.	Tons	Value	No.	Value	No.	Value	Yards	Value
					$		$		$		$
1	Kenora and Rainy River Districts....	311	....	.....	....	142	79,275	128	5,310	345,315	50,626
2	Lake Superior..........................	392	15	480	67,800	85	46,540	63	5,760	1,106,325	107,241
3	North Channel.........................	165	12	347	72,500	35	25,050	61	6,085	443,608	52,615
4	Georgian Bay..........................	598	29	772	209,740	161	117,820	114	6,260	1,574,607	163,384
5	Lake Huron............................	309	18	508	113,840	74	63,425	36	3,185	1,057,300	139,436
6	Lake St. Clair, St. Clair and Detroit Rivers..........................	142	....	.....	....	39	13,385	82	4,807	....	....
7	Lake Erie and Upper Niagara River...	802	30	730	262,800	156	171,870	140	8,935	1,414,342	215,729
8	Lake Ontario, Lower Niagara and St. Lawrence Rivers..................	731	....	.....	....	243	118,107	207	9,257	1,162,370	110,881
9	Sundry Inland Waters...............	593	9	221	41,800	54	29,450	174	9,022	346,150	31,627
	Totals......................	4,043	113	3,058	768,480	989	664,922	1,005	58,621	7,450,017	871,539

APPENDIX

Quantities of

No.	District	Herring	Whitefish	Trout	Pike	Pickerel (Blue)	Pickerel (Dore)
		lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
1	Kenora and Rainy River Districts......	....	710,280	117,175	858,444	19,815	1,095,039
2	Lake Superior............................	2,525,753	389,330	1,746,607	6,698	....	92,728
3	North Channel...........................	9,861	295,341	412,447	60,460	....	133,652
4	Georgian Bay............................	22,035	1,089,975	1,622,443	84,258	260	89,763
5	Lake Huron..............................	550,936	204,761	1,680,338	475	....	139,777
6	Lake St. Clair, St. Clair and Detroit Rivers..............................	....	350	....	22,183	10,715	25,825
7	Lake Erie and Upper Niagara River....	360,962	1,267,485	3,155	30,516	2,538,256	134,977
8	Lake Ontario, Lower Niagara and St. Lawrence Rivers....................	1,394,412	843,095	555,679	128,589	13,592	31,814
9	Sundry Inland Waters.................	48,736	1,358,397	116,875	119,689	472	245,400
	Totals......................	4,912,695	6,159,014	6,254,719	1,311,312	2,583,110	1,988,975
		$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
	Values......................	294,761.70	800,671.82	813,113.47	91,791.84	154,986.60	258,566.75

No. 1

DEPARTMENT, ONTARIO

of Ontario, for year ending December 31st, 1929

MENT

Seine Nets			Pound Nets		Hoop Nets		Dip and Roll Nets		Night Lines		Spears		Freezers and Ice Houses		Piers and Wharves		Total
No.	Yards	Value	No.	Value	No.	Value	No.	Value	No. Hook	Value	No.	Value	No,	Value	No.	Value	
		$		$		$		$		$		$		$		$	$
...	......	......	42	13,000	58	3,040	....	.....	......	.....	...	.....	120	37,630	91	13,615	202,496
...	......	......	59	29,150	....	....	....	.....	22	100	...	.....	26	13,750	34	11,175	281,516
...	......	......	136	63,200	....	....	....	.....	......	.....	...	.....	29	10,605	29	23,000	253,055
7	1,300	1,350	94	112,050	31	715	1	6	35,885	4,088	7	38	55	32,685	57	19,570	667,706
...	......	......	117	71,150	....	....	....	.....	14	23	...	.....	41	17,575	14	9,175	417,809
27	5,395	3,338	189	21,930	....	....	....	.....	5,600	340	...	.....	31	12,125	15	3,850	59,775
41	11,900	9,335	585	326,900	22	410	5	25	4,900	147	...	.....	91	143,638	55	29,625	1,169,414
14	1.745	1,630	.....	....	563	18,990	7	1,019	9,830	390	...	.....	45	10,350	22	3,010	273,634
62	6,607	6.904	34	11,280	218	7,990	66	359	3,925	278	68	488	58	11,725	24	3,175	154,098
151	26,947	22,557	1,256	648,660	892	31,145	79	1,409	60,176	5,366	75	526	496	290,083	341	116,195	3,479,503

No. 2

FISH TAKEN

Sturgeon	Eels	Perch	Tulibee	Catfish	Carp	Mixed Coarse	Caviare	Total	Value
lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	$ c.
22,849	....	12,850	254,582	75,939	10,443	249,871	900	3,428,187	356,427 65
1,306	....	150	2,744	125	1,119	89,989	....	4,856,549	446,129 48
12,320	....	7,569	....	....	819	353,017	....	1,285,486	133,754 83
2,299	....	5,894	94,932	3,698	67,804	146,138	34	3,229,533	389,003 33
9,926	....	35,776	213,222	974	2,631	101,435	1,013	2,941,264	322,645 66
12,886	....	62,224	....	26,194	60,993	147,736	340	369,446	25,880 91
27,076	12	5,689,210	....	116,950	194,603	895,830	1,073	11,260,105	766,995 72
2,968	74,612	154,610	1,940	122,617	89,450	277,649	....	3,691,027	321,414 29
29,664	15,332	33,870	130,211	71,734	181,862	441,158	295	2,793,695	292,030 34
121,294	89,956	6,002,153	697,631	418,231	609,724	2,702,823	3,655	33,855,292	....
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
48,517 60	7,196 48	360,129 18	48,834 17	33,458 48	30,486 20	108,112 92	3,655 00	....	3,054,282 21

APPENDIX No. 3

Comparative Statement of the Yield of the Fisheries of the Province of Ontario

Kind	1928	1929	Increase	Decrease
	lbs.	lbs.	lbs.	lbs.
Herring	5,300,519	4,912,695	....	387,824
Whitefish	5,823,448	6,159,014	335,566	....
Trout	6,659,465	6,254,719	....	404,746
Pike	1,246,799	1,311,312	64,513	....
Blue Pickerel	2,149,647	2,583,110	433,463	....
Pickerel Dore	2,001,288	1,988,975	....	12,313
Sturgeon	139,197	121,294	....	17,903
Eels	122,797	89,956	....	32,841
Perch	4,693,402	6,002,153	1,308,751	....
Tullibee	1,030,426	697,631	....	332,795
Catfish	434,808	418,231	....	16,577
Carp	724,038	609,724	....	114,314
Coarse Fish	3,051,459	2,702,823	....	348,636
Caviare	4,411	3,655	....	756
Total	33,381,704	33,855,292	*473,588	....

*Net increase.

APPENDIX No. 4

Statement of the Yield of the Fisheries of the Province of Ontario for year 1929 Compiled from the Fishermen's Annual Returns

Kind	Quantity	Price per Pound	Estimated Value
	lbs..	$ c.	$ c.
Herring	4,912,695	0 06	294,761 70
Whitefish	6,159,014	13	800,671 82
Trout	6,254,719	13	813,113 47
Pike	1,311,312	07	91,791 84
Blue Pickerel	2,583,110	06	154,986 60
Pickerel Dore	1,988,975	13	258,566 75
Sturgeon	121,294	40	48,517 60
Eels	89,956	08	7,196 48
Perch	6,002,153	06	360,129 18
Tullibee	697,631	07	48,834 17
Catfish	418,231	08	33,458 48
Carp	609,724	05	30,486 20
Coarse Fish	2,702,823	04	108,112 92
Caviare	3,655	1 00	3,655 00
Total	33,855,292	....	3,054,282 21

APPENDIX No. 5

Value of Ontario Fisheries for a Period of Twenty Years, 1910 to 1929, Inclusive.

Year	Value	Year	Value
	$ c.		$ c.
1910	2,348,269 57	1920	2,691,093 74
1911	2,419,178 21	1921	2,656,775 82
1912	2,842,877 09	1922	2,807,525 21
1913	2,674,686 76	1923	2,886,398 76
1914	2,755,293 11	1924	3,139,279 03
1915	3,341,181 41	1925	2,858,854 79
1916	2,658,992 43	1926	2,643,686 28
1917	2,866,424 00	1927	3,229,143 57
1918	3,175,110 32	1928	3,033,944 42
1919	2,721,440 24	1929	3,054,282 21

Report of Special Committee

ON THE

Game Fish Situation

Hon. Finlay Macdiarmid, Chairman
Prof. B. A. Bensley, University of Toronto
C. A. Candee, Toronto Anglers Association

PRINTED BY ORDER OF
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SESSIONAL PAPER, No. 54, 1930

ONTARIO

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1930

To the Honourable W. D. Ross,

Lieutenant-Governor of the Province of Ontario.

May It Please Your Honour:

I have the honour to submit herewith, for the information of Your Honour and the Legislative Assembly, the report of a Committee, composed of Honourable Finlay G. Macdiarmid, formerly chairman of the Fish and Game Committee of the Ontario Legislature, Professor Benjamin A. Bensley, in charge of the Department of Zoology of the University of Toronto, and Mr. Charles N. Candee, of The Ontario Anglers Association, appointed by the Honourable Charles McCrea, Minister of Mines and Minister in charge of the Game and Fisheries Department, to enquire into the game fish situation in Ontario.

I have the honour to be,

Your Honour's most obedient servant,

C. McCrea,

Minister of Mines.

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SPECIES OF FISHES CONSIDERED IN THIS REPORT

Long-nose Gar	*Lepidosteus osseus*, Linnaeus.
Dogfish	*Amia calva*, Linnaeus.
Brown Trout	*Salmo fario*, Linnaeus.
Steelhead Trout	*Salmo gairdneri*, Richardson.
Rainbow Trout	*Salmo irideus shasta*, Jordan.
Lake Trout	*Cristivomer namaycush*, Walbaum.
Speckled Trout	*Salvelinus fontanalis*, Mitchill.
Sucker	*Catostomus especially commersonnii*, Lacépède. *Moxostoma.*
Carp	*Cyprinus carpio*, Linnaeus.
Catfish	*Ameiurus melas*, Rafinesque. *Ameiurus nebulosus*, Le Sueur.
Pike	*Esox lucius*, Linnaeus.
Maskinonge	*Esox masquinongy masquinongy*, Mitchill.
Perch	*Perca flavescens*, Mitchill.
Pickerel	*Stizostedion vitreum*, Mitchill.
Small-mouthed Black Bass	*Micropterus dolomieu*, Lacépède.
Large-mouthed Black Bass	*Aplites salmoides*, Rafinesque.
Sunfish	*Eupomotis gibbosus*, Linnaeus.
Rock Bass	*Ambloplites rupestris*, Rafinesque.
Ling	*Lota maculosa*, Le Sueur.

REPORT OF THE

Special Fish Committee
1928-30

Appointed to enquire into certain phases of The Game Fish Situation in Ontario, and to Recommend Measures of Improvement.

To the Honourable Charles McCrea,
Minister of Mines.

Sir,—The Ontario Government Game Fish Committee, appointed at your instance in May, 1928, to enquire into the game fish situation in Ontario, begs to report as follows:—

Instructions

The Committee was given verbal instructions to make enquiries into and to report upon certain phases of the game fish situation, the nature of the instruction being more fully set forth in the following public announcement made under date of May 24th, 1928:

"Honourable Charles McCrea, Minister of Mines, presiding over the Game and Fisheries Department, announced to-day that he had requested a Committee of three, consisting of Hon. Finlay G. Macdiarmid, M.P.P., Chairman of the Fish and Game Committee of the Legislature, Professor Benjamin A. Bensley in charge of the Department of Zoology of The University of Toronto, and Mr. Charles N. Candee, of The Ontario Anglers Association, to investigate into matters pertaining to game fish in the Province. The work of this Committee, independent of the Department, will be to enquire generally into all phases of depletion and to suggest methods of improvement which can be advantageously worked out for the improvement of game fishing.

The Department has for some years been carrying out work along these lines and it may be that this Committee, looking at matters from a different angle, can contribute beneficial suggestions which, in co-operation with activities of the Department, can improve conditions.

The Committee is not in the nature of a Commission with specific directions to report on the general question of fisheries but will look into the hatchery work being carried on, the methods at present employed, the views as to suitability of streams and generally is to make such concrete proposals from a public standpoint as will make for improved conditions."

Concerning the interpretation placed by the Committee upon what should be the extent and purview of its normal or expected functions, the lines along which information might be effectively sought, and the general content and outlook of the report to be submitted, some preliminary discussion and explanation is perhaps in order.

It will be evident even from superficial examination that the game fish situation in Ontario may be viewed from many angles. Though specifically entrusted only with a study of the case from a more external or independent point of view and with the task of bringing in suggestions of constructive value only in that relation, the Committee has nevertheless often been at a loss to distinguish between productive and unprofitable lines of enquiry, or again between matters more immediately pertinent to the enquiry and others more properly referable to the administration. If we consider, for example, the question of depletion, concerning which there has been a great deal of discussion, it will be readily understood that in addition to the difficulties and uncertainties in the way of obtaining satisfactory information, there are various interpretations which can and have been placed on possible causes. These causes, i.e., the conditions which have operated so as to bring about a serious reduction in the native stocks of wild animals, will naturally include any circumstance connected directly or indirectly with the removal of animals, any disturbance of natural balances, and any alteration of life conditions in injurious directions. They will also include any lapse or failure of legislative machinery which under existing conditions is necessary to protect or replenish supply. Depletion, however, is but one phase of the situation, in which will be found literally hundreds of minor factors, more or less closely interwoven, and having in one way or another a possible bearing upon the case.

So far as the Committee has been able to ascertain the chief elements in the game fish situation in Ontario, most of which have been more or less under public discussion, are as follows:

(1) *Are the Game-fish Resources in a Critical Position?*

The people of Ontario have undoubtedly had a very great confidence in the capability of a large and even predominating portion of the Province to sustain game-fishing. This confidence, born of the realization that we possess relatively enormous wild areas of inaccessible and in large measure unoccupied country affording natural protection to wild life, has of late been badly shaken by the further realization that through the development of transport facilities, industry, and tourist trade the picture has become rather suddenly and materially changed. A question which for a long time has been foremost in the minds of some of our sportsmen and conservationists, namely, as to how long the native game-fish resources will hold out, has now become one of much more general and public concern.

(2) *Fish Cultural Efficiency.*

Since fish cultural processes have become well established, the anxiety that is being felt as regards depletion of native stocks is naturally followed by consideration of the needs and possibilities of artificial replacement. In this issue, there is not only the physical and historical setting of the fish hatcheries in relation to the area served, but also other considerations which, in the present instance, have attracted even greater public notice. One of these is a general criticism or doubt as to the final effectiveness of artificial propagation, the other a greatly increased appreciation of the importance of the game-fish element in general, whether as regards hatchery production, or in other respects.

(3) *The Freedom of Taking Wild Life:*

The Province of Ontario is still young enough and also from the point of view of development old enough to present at this time exactly that contrast which, so far as can be traced elsewhere, has always come about as a result of the original freedom of taking wild life being brought into opposition to growing public realization of the needs of conservation and management. People who are at first in a pioneering position easily and rightly become reliant upon natural sources of food supply. But their successors also retain with tenacity the freedom so acquired, and do not, except on the basis of greatly improved prospects or education, willingly concede the necessity of conservation, and very often at least do not realize the directions in which their best interests lie. This condition has a great many extensions and consequences, and is foundational to questions of public education and of respective rights and privileges as between resident and non-resident populations, settlers and tourists, sport and commercial fishermen.

(4) *Game-fish Protection:*

Of the many ramifications of this issue, there is one at the present moment which probably more than any other is causing public concern. Due to the activities of certain lawless or perhaps sometimes thoughtless elements of the resident population, infractions of game laws take place in situations, at times of the year, and under conditions of climate and terrain which combine to make detection or prevention difficult or impossible. Native stocks of game-fishes may be seriously reduced. On the other hand, within at most a few months these same stocks of fishes will be relied upon by summer sportsmen and vacationists as well as by many people who either profit by or may perhaps be dependent upon tourist trade. Such conditions exist in many communities more or less isolated in the off season, and, in the opinion of many, constitute the main problem in so far as protective service is concerned.

(5) *Relation of the Public to Protective Service:*

In much of the discussion which has been going on with reference to the protective service and its possible improvement, it is evident that while there are plenty of constructive ideas to be considered, there are also many indications of wrong perspectives which more or less obscure the true situation. Many people expect to profit in one way or another from the fishing which goes on in public waters, but do not expect to participate in the responsibility of seeing that the supplies are not wasted or plundered. This attitude might be accepted as an ordinary manifestation of human nature were it not for the fact that many people seem to expect protective service of a localized and almost urban type, notwithstanding that the Province has an enormous area to be managed, and that we are still in the stage of depending upon natural resource revenue to a considerable extent, and that we have decided limitations in the matter of improved or substitutive revenue which might under other circumstances be applied to the purpose. This comment, however, is not made in a spirit of criticism, but simply to point out that an important element in the game-fish situation is to establish a foundation in which the responsibilities, physical difficulties, and possibilities of protective service may be fairly and reasonably discussed.

(6) *The Basic Factors in Game-fish Management:*

It is observable that in practically all discussions of means or methods of management a great deal of emphasis is placed upon the personal factor rather than upon the building up of an efficient service system. Many of the difficulties which beset a service organization, however, are of a technical nature in that proper procedure is not simply a matter of judgment or decision but must be based upon detailed knowledge of natural facts, in this instance, of facts concerning the growth and reproduction of fishes and the conditions necessary for success. For this reason, and because of the growing importance of technical information the incorporation into fishery service of scientific components becomes an important element of the game-fish problem.

(7) *The Province and Provincial Fisheries Service:*

It is difficult to sum up in a few words the particular setting of game-fish service in the Province. Ontario presents very great contrasts as between long established and new development, respectively south and north. In general, as regards the utilization and control of game-fishes, the Province is in an intermediate position. The changes which are taking place are in most respects analogous to those which have been gone through elsewhere, but there are differences so pronounced, especially as regards the are to be served, the extent of natural resource development and government service required, efficiency and economy of operation to warn against accepting current procedures elsewhere as models to follow.

Our development has also a particular facies in relation to the position of Ontario as a Canadian Province and the historical setting implied by the British North America Act, the original fisheries authority of the Dominion Government, and the subsequent reference or transfer of authority to the Province. As a particular feature of this setting, we have now the Provincial Department of Game and Fisheries, which for present purposes may be described as both an administrative and public service organization, and which for over a quarter of a century has been engaged in the establishment and maintenance of a system designed to give service along protective, fish cultural and other lines significant in the present relation.

In making an enquiry into the game-fish situation, the Committee has considered the various issues as outlined above mainly on the basis of independent external observation and by careful analysis of such information and representations as could be obtained from public sources. No attempt whatsoever has been made to examine into the administrative procedure or to criticise or justify any particular phase of the fisheries service organization. On the contrary, the whole matter has been considered in an objective relation, having in view the establishment of a better understanding of game-fish questions and of plans or policies for improvement of game-fish management.

Sources of Information

While no formal sittings were arranged throughout the Province, the Committee visited a number of places, including Normandale, Mount Pleasant, Ingersoll, Southampton, Wiarton, Horning's Mills, Orono, Omemee, Lindsay, Peterborough, Marmora, Madoc, Glenora, Picton, Belleville, Kingston, Sharbot Lake, Newboro, Battersea, Ottawa, Sault Ste. Marie, Port Arthur, Fort William and Kenora. At most of these places, meetings were arranged by local interests representing different phases of the game-fish situation, whereby, apart from formal recommendations submitted on behalf of Associations, it was made possible to have open friendly discussions concerning local sentiment in different parts of the Province.

Conferences were arranged with Mr. A. L. Killaly, Superintending Engineer of the Trent Canal, and Mr. A. T. Phillips, Superintending Engineer of the Rideau Canal, concerning the relation of water levels in these canal systems to game-fish conservation.

The Committee also visited many of the public and private fish cultural establishments in the United States, for the most part in the tier of states bordering upon the Great Lakes and having in many ways conditions analogous to those in Ontario. These establishments included the State Hatchery at Caledonia, N.Y., the privately owned hatchery of James Annin and Sons, Caledonia, N.Y., the State Hatchery at Pleasant Mount, Pennsylvania, the privately owned hatchery of the Paradise Brook Trout Company, Cresco, Pennsylvania, the State Hatchery at Hackettstown, New Jersey; the Aquarium, New York City; the Federal Hatchery of the United States Bureau of Fisheries at Holden, Vermont; the State Hatchery at Paris, Michigan; the State Hatchery at Comstock Park, Michigan; the State Hatchery at Hastings, Michigan; the State Hatchery at Three Lakes, Indiana; the State Hatchery at Defiance, Ohio; the State Hatchery at Akron, Ohio; Riley's Fish Farm at Barberton, Ohio; the State Hatchery at Corry, Pennsylvania, and the State Hatchery at Chatauqua, New York.

Apart from enquiries made of the officers of these establishments, conferences were arranged during the visits with several persons, including Dr. E. Moore, Director of Biological Survey, Investigator in Fish Culture, Conservation Department, New York; Mr. John W. Titcomb, Superintendent, State Board of Fisheries and Game, Connecticut; Dr. William C. Kendall, Ichthyologist, Bureau of Fisheries, Washington, D.C.; Mr. Fred A. Westerman, Director of Fish Division, Department of Conservation, Michigan; Dr. C. L. Hubbs, Curator of Fishes, State Museum of Zoology, Michigan; Mr. T. H. Langlois, State Fish Pathologist, Michigan; Messrs. James and H. K. Annin, Consulting Fish Culturists, Caledonia, New York.

The Committee is under obligation to Mr. Garnet Bell, Toronto, who rendered assistance in many ways during the progress of the investigation.

Much assistance and a great fund of information was obtained through correspondence with Mr. Henry O'Malley, Commissioner of Fisheries, Washington, D.C.; Mr. N. R. Buller, Commissioner of Fisheries, Pennsylvania; Mr. Alexander Macdonald, Commissioner, Conservation Department, New York State; Mr. Thaddeus Surber, Superintendent of Fish Propagation, Minnesota; Mr. G. S. Davis, Pathologist in Charge of Investigations in Fish Culture, Bureau of Fisheries, Washington, D.C.; Mr. W. H. Fell, Secretary, Board of Fish and Game Commissioners, New Jersey; Mr. D. A. Thompson, Chief, Division of Fish and Game. Ohio; Mr. George N. Mannfeld, Superintendent of Fish and Game, Indiana.

The Provincial Departments of Public Works, Lands and Forests, and the Ontario Hydro-Electric Power Commission, as well as the Dominion Department of Railways and Canals, have supplied valuable information.

During the progress of the investigation, circular letters were sent to various individuals and organizations throughout Ontario, including sportsmen, sportsmen's associations, hotelkeepers, tourist resort owners, outfitters and others likely to be interested or informed as to the general situation, asking for expressions of opinion.

A public meeting was also held on January 9th, 1929, at the Parliament Buildings, Toronto, at which the combined recommendations of the Ontario Federation of Anglers, representing various local associations throughout the

Province, were formally presented and at which delegations from various parts of the Province spoke to the recommendations or outlined to the Committee the peculiarities of their respective districts.

Mr. A. L. Killaly, Superintending Engineer of the Trent Canal, and Professor J. P. McMurrich, Chairman of the Biological Board of Canada, attended this meeting by invitation and contributed materially to the information available to the Committee.

A special meeting was held on January 30th, at which the Honourable Wallace Nesbitt and Mr. M. H. Ludwig discussed with the Committee the game-fish situation in Georgian Bay.

Finally, the Committee had at its disposal a large amount of published material, including the reports of the Ontario Government Commissions of 1890-1892 and 1910-1911, the reports of the Dominion Fisheries Commissions of 1893-1894 and 1908, the annual reports of the Provincial Department of Game and Fisheries and of the Dominion Department of Marine and Fisheries, the reports of various State Commissioners, of the United States Bureau of Fisheries, the American Fisheries Society, and many other documents bearing upon fishery problems in general.

The Committee is under great obligation to various individuals and associations both for information readily supplied and for local arrangements which have facilitated the work. Special mention should be made of the contribution of the Ontario press in giving public advertisement to the work of the Committee, and to the questions upon which information was desired.

It is a pleasure also to acknowledge the willing co-operation and uniform courtesy experienced in the course of enquiries prosecuted at various points in the United States. To all the Committee extends its cordial thanks.

Representations

During the course of this enquiry, as previously stated, the Committee has sought information along several specific lines and has had presented to it from many sources a large number of suggestions, requests for further investigation and other types of representation. Among these first place is to be given to a communication from the Ontario Federation of Anglers, a body made up of some twenty-five associations of game-fish, game, forest or allied interest throughout the Province and contributing directly to the communication, and perhaps as many more local bodies associated closely or otherwise with the Federation.

The Committee acknowledges gratefully the helpfulness of these representations to its various lines of enquiry, pointing out also that it has been a matter of very great difficulty to place upon many of them what might be generally accepted as a proper interpretation. Some of the matters treated were, for example, based upon points of internal organization which could appropriately be considered only by the Provincial authorities directly. Further, some of them, both of this class and of reference also to matters which in their external or public relation might have been properly considered by the Committee were of the nature of impressions which within ordinary means of treatment could not easily be substantiated. If we add to this the fact that in any enquiry of this kind it is necessary to depend upon lay information for observations which ought to be available in technical form, and the circumstance, well-known to conservationists, that individuals often develop enthusiasm for particular causes when their private interests, as opposed to the public interests, have been or are going to be affected, it will be seen that we have, by and large, a situation out of which constructive suggestion available for purposes of the Committee could only with considerable discrimination be obtained.

While this statement is to be considered purely in the light of such construction as the Committee has placed upon the information received, it is not out of the way to state that the nature of these various representations as well as the composition and local distribution of the associations, reveals clearly the important fact that the best aims of these associations are not different from those of the Department of Game and Fisheries, and further that effective co-operation must depend upon the ability of the associations to present clear-cut suggestions of public policy rather than of private interest, for the most part, but by no means necessarily, of general rather than local application, and without the expectancy of detailed or advanced information beyond ordinary observation or in general an intelligent lay point of view. The Department then should on its part not only welcome such co-operation but also have at hand the necessary technical experience and facilities to give force and substance to it.

Societies of Conservational Outlook

While this report is concerned with game-fish matters alone, it is generally recognized that various game, game-fish, protective, natural history and conservational interests are not only closely allied but are commonly represented by the same individuals and associations. The Province is now in the position or stage of development in which it can be plainly perceived that the growth of these associations along properly directed lines is likely to prove one of the strongest influences which will in the near future be brought to bear upon the conservational situation and will provide the countercheck for all types of destructiveness and wastage which would otherwise obtain. For this reason, the Committee has been at some pains to obtain as complete a statement as possible of Provincial societies representing the various interests named, with more especial reference to those representing the game-fishes. The list is as follows:

Athens	Charleston Lake Association.
*Bobcaygeon	Bobcaygeon Game and Fish Protective Association.
Brockville	Brockville Game and Fish Protective Association.
Campbellford	Game and Fisheries Association.
*Chaffey's Locks	Chaffey's Locks Fish and Game Protective Association.
*Fenelon Falls	Fenelon Falls Anglers' Association.
*Fort William	Fort William Fish and Game Protective Association.
*Georgian Bay	Georgian Bay Cottagers' Association.
Grey County (Thornbury)	Grey County Fish and Game Protective Association.
*Honey Harbor	Honey Harbor Cottagers' Association.
*Hamilton	Hamilton and District Angling and Casting Association.
Havelock	Game and Fisheries Association.
*Hespeler	Hespeler Gun Club and Game Protective Association.
Hanover	
*Huntsville	Huntsville District Game and Fish Protective Association.
Huron County (Exeter, Ont.)	Huron Game and Bird Protective Association.
Kenora	Kenora Fish and Game Committee of Board of Trade.
*Kingston	County of Frontenac Fish and Game Protective Association.
*Lindsay	Victoria-Haliburton Game and Fish Protective Association.
London	London Angling Club.
London	Western Ontario Fish and Game Protective Association.
Marmora	Marmora Booster Club.
Midland	The Georgian Bay Anglers' Association.
Magnetawan	Magnetawan Pioneer Association.

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*Ontario Federation of Anglers.

Malachi	Malachi Campers' Association.
*North Bay	Nipissing Fish and Game Protective Association.
*Niagara Falls	Niagara Falls Hunters' Game and Fish Protective Association.
Orillia	Orillia Angler's Association.
*Oshawa	Oshawa Anglers' Association.
Ottawa	Ottawa Game and Fish Protective Association.
Parkhill	Game Protective Association.
*Peterboro	The Peterboro Fish and Game Protective Association.
Peterboro	Peterboro Chamber of Commerce.
Port Hope	Port Hope Fish and Game Protective Association.
*Port Arthur	Port Arthur Game and Fish Protective Association.
*Port Elgin	Tamarac Fishing Club.
St. Thomas	Southern Counties Game Protective Association.
*Sault Ste. Marie	Algoma Game, Fish and Forest Association.
Sharbot Lake	Frontenac Game and Fish Protective Association.
*Smith's Falls	Smith's Falls Anglers' Association.
*Stratford	The Stratford Anglers' Association.
*Sudbury	Sudbury District Game and Fish Protective Association.
*Sudbury	Sudbury Trout Club.
*Timmins	Porcupine Rod and Gun Club.
*Toronto	Ontario Hunters' Game and Fish Protective Association.
*Toronto	Toronto Anglers' Association.
Trent River	Game and Fisheries Association.

Except, perhaps, for the game fish interests this list is doubtless very incomplete. If all the societies interested in various phases of the natural resources were to be ascertained and listed it would doubtless be found that we have in Ontario not only a very large number of individuals and of societies capable of being federated or organized on the basis of a general protective policy, but also that we would have in this type of organization a means of public education, the need of which has recently and in the past been stressed by foresighted citizens of practically all sections of the Province and all walks of life.

Comments on the General Situation

During the course of this investigation, it has been repeatedly brought home to the Committee that while fishery regulation is an immediate practical necessity however founded, the evidence upon which intelligent action might or should be based is often far from satisfactory. Game-fish control, including therein provision for reasonable use and enjoyment, avoidance of misuse, and arrangements for natural or artificial replenishment, is at best a problem beset with difficulties.

It is perhaps inevitable that a matter so intricate as the growth, reproduction and relative abundance of animals living in a state of nature, more especially of fishes, which live in a medium removed from direct observation, should give rise to much uncertainty, both from the lack of precise information concerning the animals themselves and from the lack of public understanding of the situation. It is unfortunate that practical fishery work has not, in general, advanced to the technical stage characteristic of other fields in which a solid basis of objective information is conceded to be necessary and has been gradually built up for control purposes. The result is that both on the part of officials and on the side of the public there is a far too common tendency to look upon game-fish management, as a matter of personal judgment or even of local convenience, to consider fishery regulation without regard to the basic rules and regulations specified by nature herself, or again to take a short view of the situation by failing to consider trends and tendencies in proper develop-

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*Ontario Federation of Anglers.

mental perspective as opposed to conditions immediately presented. This is especially true in respect of current opinion as to the causes of fish depletion.

It is scarcely necessary to point out that if we had at our disposal all the basic information necessary for control purposes there would still be plenty of room for discussion and for divergence of opinion as to what line of operation would be best to follow. Practical expediency and technical information are quite different phases of the matter. This statement applies with particular force to Ontario to-day because of the enormous area to be administered, the difficulties of its physical nature, as well as the transitional condition that our Province is now in as regards the expected sources of revenue and reasonable expenditure in relation to the natural resources in general.

Taking conditions as they are, and realizing that in relation to a great mass of representations and of personal observations, to a greater or less extent germane to the subject, there ought to be some practical basis of discussion, it has appeared to the Committee that certain matters of the general outlook which are commonly discussed and to a certain extent misinterpreted should first of all be reviewed. These matters refer to (1) the practical value to be expected from the fact of natural increase or excess productivity of fishes; (2) the influences leading to depletion; (3) the application of limiting legislation, and (4) the effectiveness of propagatory and re-stocking processes and the hatchery situation in general.

(1).—Natural Increase

Regarding the natural increase or excess productivity of fishes, it is an established fact that animals living in a state of nature produce far more young than are necessary to maintain the species even in abundance. Of this principle the game-fishes are shining examples. Both in the case of fishes and in that of land animals, especially the domesticated animals. the occurrence of excess productivity has been used to good advantage in various ways. In the case of the fishes it has also been grossly misused, largely, we may presume, because in a water medium results are not so easily seen.

A body of water containing, let us say, the remnants of a species formerly abundant should, on the basis of opinions popularly held, and under conditions of adequate protection, show a return to something like the original plentitude of the species concerned. But there are comparatively few instances in which such protection has been provided, and there are comparatively few instances in which a return to what may be called plentitude, whether under protection or not, has actually taken place. It is just as likely, perhaps more likely, that in the meantime the water has become modified, or that a new balance between the various species themselves has been set up by which the depleted species is no longer in the race. This woud be especially true of the game-fishes, because notwithstanding their recognized ability to take care of themselves, they are species which have come to be desirable as game-fishes for the reason that nature had already marked them as dominant carnivorous elements in a natural food cycle, and, therefore the removal of many individuals of any one of such species is likely to be of much greater consequence as regards the next species to attain dominance than would be the case of many of the less active competitors in the food cycle.

Generally speaking, until we are able to determine what the local conditions actually are, so that we can forecast with some accuracy the probabilities of success, the only proof that natural productivity will bring back a species to a state of plentitude, will be furnished by direct observation of what is shown in bodies of water that have been kept under conditions of perfect closure for several years. The assumption that a return to conditions of plentitude must of necessity take place is without acequate foundation.

Furthermore, it has been commonly assumed that if species are introduced into new waters in which they successfully mature, they will also reproduce and multiply there, so that by a process of natural increase abundance will be established. Probably, if statistical data were available, it would be found that the transfer of adult bass in Ontario or elsewhere has been more often successful than trials with other game species. Numerous instances have, however, come to light in which such has not been the case. When, some years after a planting has taken place, sizable adults are found but no young, the usual explanation is that the young are being consumed by trash or enemy fish. It is more likely to be the case that the individuals of the species concerned, while they were able to grow up, did not find conditions suitable for propagation or for growth of the young, whether from lack of physical conditions suitable for spawning or lack of provision of suitable food for the fry. And it is possible also that severe competition is going on between individuals of the species, old and young, because of a general but not fatal deficiency of food materials.

Again, as noted elsewhere in the discussion of hatchery practice, it appears fairly plain that the circumstance of excess productivity of fishes has brought about a sort of easy optimism among fish culturists as regards the hatching of eggs in large numbers and liberal distribution of the fry. The real question at issue is not whether eggs can be obtained and hatched in large numbers, but whether fish can be grown to such a size that it is profitable, either for sport or income, to rear them, and what the chances of survival are when transferred at any stage to natural waters.

No farmer or poultryman would think of hatching large numbers of fowl and after turning them loose without food or protection from their natural enemies, expect to find them in abundance. Yet this is largely what has taken place in fish culture. Even assuming all the possible success that may be expected of direct supervision of the eggs in hatching we still have the following elements of uncertainty: (a) that under absolutely natural conditions comparatively few eggs ever have a chance of going through to mature fish; (b) artificially reared fish will not be so alert in protecting themselves as naturally produced fish; (c) chance planting will most likely result in conditions unsuitable for the young and perhaps adults to live.

This uncertainty should be a warning against accepting too readily the notion that artificial handling improves on nature. A very good case can be made for artificial handling as applied to domesticated animals, and even as applied to some game animals turned loose in nature, but in the present state of knowledge as applied to fishes it would be the better part of wisdom to protect natural propagation so far as is possible and to concede to nature the advantage of experience as to how the work is successfully accomplished.

In a word, although the excess productivity of game-fishes is one of the great bounties of nature, it is likely to be of no practical consequence, except as a matter of mere chance, unless conditions in the water are favourable, and under artificial handling the factors favouring or impeding the growth and reproduction of these fishes must have been accurately determined.

(2).—Depletion

Depletion is a matter concerning which there appears to be a great deal of obscurity and considerable divergence of opinion. This condition arises no doubt from the fact that some view the situation as a local or temporary one, while others have a long range perspective of the tendencies at work making for game-fish scarcity. To the average sportsman perhaps, a state of depletion exists when the fishing is so poor as to be no longer worth while to him. To the tourist trade interest the question is whether or not the fishing is good enough to prove the deciding element in favor of a given locality, and for the same reason public admission of a state of depletion is not likely to be made until after it has reached a very advanced stage.

Leaving aside for the present the fact that preventing or overcoming depletion is the final issue, there appear to be two aspects of the matter which are significant in a more fundamental way. The first is the manner in which depletion is actually brought about, and the second has to do with the local situation.

Depletion is not, as frequently understood, a condition either of recent origin or of temporary nature. Many of the simpler suggestions as to how depletion can be remedied fall considerably short of the mark, though these suggestions do no harm, except that they tend to put too easy an interpretation upon a matter which is actually difficult, namely, how to bring depleted waters back to a state of plentitude. It would be better to consider depletion as a process and to understand how reduction of native stocks begins in the first place in order to appreciate the nature of the final stage to which the term depletion is usually applied.

The fact made clear by early observers, that originally the waters of our lakes and streams abounded in game-fish is well known to every one. To enquire why those waters should have been full of fish is perhaps irrelevant, but it brings forcibly to mind the fact that the abundance of species desirable from a human standpoint was arrived at by nature long before the human element appeared upon the scene, and before human interference began to modify natural conditions. In the light of present knowledge, it appears that after a developmental period of perhaps thousands of years, during which time all the inhabitants of the water, both fishes and food organisms, were fighting for their individual existences, a state of balance had finally been arrived at in which every factor making for increase or limitation of numbers was exactly covered.

Early travellers and pioneer settlers made use of those fish as the Indians had done before them. Being denied the freedom of profligacy in other respects, they probably enjoyed the privilege of letting much of what they took go to waste. They did not produce depletion as we know it now, but they undoubtedly struck the first blow at species already fighting for their existence, and in so doing began to throw the balance to the wrong side.

This process has been going on ever since. It has been assisted by almost every influence that has come about in the course of social and industrial progress. We have only to run through the list—deforestation, navigation facilities, water supply, pollution, power development, tourist trade, and what not—to see how the process of fish extermination works. When we observe the productivity of certain waters, it appears to be little short of marvellous that the fishing has held up at all. On the other hand, there is scarcely a body of water in Ontario that does not reflect in its game-fishing its industrial and tourist history. In the case of waters which ten years ago had game-fishing brisk enough to inspire enthusiasm and since then rapidly falling off, the explanation is fairly simple, namely, that the fish are not now and never have been capable of sustaining good fishing even for small numbers of sportsmen or for any great length of time. What is happening now is that fishing by increased numbers of sportsmen and others is breaking the last defence so far as the ability is concerned of particular species to maintain propagation and growth against conditions of unnatural balance.

In the second place, we have in Ontario the widest possible range of incidence as regards the influences above described or the stage of depletion as it exists. The fact that the Province has a reputation for good game-fishing can be shown to depend upon peculiarities of this incidence. Our security herein rests upon the possession of a relatively large wild area not yet greatly occupied.

For purposes of comparison a line roughly following the Trent Canal, or more accurately following the line of pre-Cambrian contact from Georgian Bay to the St. Lawrence River, divides the Province into two parts of very different character and development. Viewing the matter historically and considering the southern and for the most part southwestern portion, we have a relatively small area which, from the possession of continuous water routes, climate and agricultural potentialities, sustained, from the game-fish standpoint, the first shock of industrial development and of depletion. Early records show that both lake and stream waters contained game-fish in abundance. They show that game-fishing with some exceptions went down rather gradually but progressively. They show also that while there were then, as there are to-day, protests and warnings from sportsmen, the process went on without attracting much attention, probably because no tourist trade element ever came into the situation.

While this development was going on, and during its advanced stages in the last century, the waters immediately along and to the northward of the pre-Cambrain line began to be accessible and also desirable from the summer visitor's point of view.

The waters involved were the Muskoka Lakes, to some extent the Georgian Bay and the magnificent lakes and streams of the Trent and Rideau systems, both in their original and modified conditions, together with the upper reaches of the St. Lawrence River. It was on the basis of the plentitude of fishes in these waters, of the scenic attractiveness of the country and the fact that the tourist movement was more or less isolated and very moderate, that the reputation of the Province for game-fishing was solidly established. It is the same waters, generally speaking, that are now in a critical condition.

Within comparatively few years attention has become focused northward. In the general movement of tourist traffic we have always been able heretofore to keep a little ahead of requirements. The question now is whether we can continue to do so. For example, industrial enterprise, based on pulp and paper, on mining, and on northern agricultural development, assisted by railroad, motor road and even aerial facilities is already putting game-fish traffic forward on the last lap of the journey to Hudson Bay. Navigation facilities on the Great Lakes and canals are making the entire shore line, especially of the upper lakes, available to cruiser traffic. In the northwest portion of the Province—Rainy River, Kenora, Thunder Bay and Algoma districts, for a long time well known to a select number of tourists to whom it was accessible as of outstanding game-fish possibilities—improved means of railroad and motor transportation, both from the United States and from the sister Province of Manitoba, now promises a large and increasing tourist invasion into the hitherto less accessible places. All these tendencies indicate that the rate of depletion will be greatly accelerated and also that further shifting of game-fish possibilities northward is out of the question.

Depletion is a process of long duration which can and in all Ontario situations is likely to be greatly accelerated. It has been kept going by sport-fishing requirements and by the food requirements of settlers and many other incidental influences. It has been hastened in recent years by increased fishing on the part of greater numbers of tourists who have found the more outlying parts of the Province becoming more easily accessible both as regards transportation and living comfort. It makes very little difference whether in a given situation depletion is claimed or admitted. Game-fishing in every body of water in the Province which is accessible is headed in that direction. Consequently every influence that can be brought to bear in any local situation to counter-balance or remove common but unnecessary causes of depletion should in the general interest be applied.

(3).—The Application of Limiting Legislation

As regards legislation of a limiting nature, there appear to be at least three phases of the matter which are of particular significance in Ontario. These are, first, the extent to which the limitation fits the natural requirement of game-fishes in respect of growth and reproduction, second, the basic soundness of uniform legislation for all parts of the Province, and, third, the practical effectiveness of the supervising or policing system. To these might be added a fourth, namely, the nature and effect of dual control as between Provincial and Dominion services.

It may be observed that any system which restricts capture, whether as regards size, quantity, times of taking, or purchase and sale, must result in conservation of the supply. The fact that in Ontario all these elements combined enter into the regulations indicates that except for minor improvements, as suggested elsewhere in this report, the plan or policy in force leaves little to be desired.

It is unfortunate perhaps that most of the changes which have been made are in accordance with the idea of "greater depletion, therefore more limitation." Little opportunity has been available of easier conditions based either upon re-stocking or natural increase. But it is to be borne in mind that fishes are in a different position from land animals in that the latter have times of greatly increased abundance so that opening and closing of hunting privileges may be more readily and also more reasonably made. Furthermore the game-fishes have always been more or less counted upon to fill the breach in the summer vacationist's programme, and have therefore been more open to continuous drainage of supply because of the absence or prohibition of other forms of sport in the wild areas at this time of the year. These disadvantages will not be counterbalanced until there are more closures and sanctuaries provided for game-fishes.

As regards the question of the fitness of the regulations to conditions represented by the natural requirements of the fishes themselves, there are two chief considerations, namely, the duration of close season and the minimum size. On these points there is general agreement, first, that no matter what the tourist or game-fishing demand may be, the fish should have protection during the spawning period, and, second, that young fish should not be taken before the period of reproductive maturity.

In this situation the value of accurate information as to spawning conditions and growth in various parts of the Province cannot be gainsaid. The difficulty is that such information is not available in sufficient detail for various species in different parts of the Province to be effectively used as a basis of controlling legislation. While it is true that in almost every locality there are men who know the conditions, sometimes by long experience but usually also in limited ways, the general state of opinion upon specific points is to so great an extent a mixture of first hand knowledge, guess work and imagination that no final dependence may be placed upon it. Ample evidence of this may be found in the reports of former enquiries and it has been abundantly illustrated in recent discussions of the spawning seasons of the bass. Only recently has the matter been placed on a proper foundation by the organization of biological survey work in the Provincial fisheries service.

Again, there is considerable difference of opinion and not a little confusion as to the relation between the beginning of the open season and the completion of the spawning season. The general expectation is perhaps that the season for all spring spawners should open immediately the spawning period is over. But it will be seen that there is another important question, namely, for how many days can fishing be safely permitted? This is the same issue as in October fishing where spring spawners are concerned, and which is involved in the question as to whether in the case of two or more species spawning at different times, such as bass, pickerel, and maskinonge, the season should be opened at different times or uniformly after the time of the latest spawning.

These questions of course involve matters of policy. What may be strictly in the interest of conservation, either through restriction of the total time or duration of fishing, or prevention of fishing in late spring or early summer long after pickerel and maskinonge have completed spawning may be inadvisable for other reasons, namely, as regards tourist trade, guide employment or public dissatisfaction because of the presumably non-essential character of the regulation, a matter not to be disregarded if public support is to be assured.

(4).—Effectiveness of Propagatory and Re-Stocking Operations, and the Hatchery Situation in General

Fish hatching processes and various allied operations connected with maintenance of supply and replenishment have obviously an important bearing upon the game-fish situation. Throughout Ontario, so far as has been ascertained by the Committee, there is a general desire among sportsmen for extensions to be made to the Provincial hatchery system along game-fish lines. At the same time, it is generally known that some criticism has been current with reference to the practical results of fish cultural work, and for this reason the advisability of extending operations has been more or less laid open to question.

In its particular relation to Ontario this criticism was originally based upon the results of trout fry planting in natural waters which seemed to indicate low survival values under the conditions shown. This, it will be observed, was a technical problem, an important one also in the sense that it represented a direct experimental attempt to find out in a practical case of artificial planting whether trout fry had a fair chance of surviving and of growing up in a natural way. Having been given a good deal of publicity, however, the conclusion indicated by the experiment gave rise to considerable discussion as to the practical results of hatchery operations in general.

It may be pointed out parenthetically that this discussion had the constructive value that it called attention to the advisability of incorporating into the Provincial hatchery service a technical component in order that opportunity might be afforded for more definite and organized attention to the investigation of Ontario waters and technical study of the hatchery processes. It had, however, the disadvantageous effect that various important elements in the hatchery situation were overlooked, and there was also a very general tendency to assume that no progress had been made along scientific and technical lines in relation to fish cultural processes.

The situation is, however, in no respect a local one. There has been in Canada at large and elsewhere, especially in the United States, considerable study of the question as to how fish cultural methods can be placed on a more secure footing whether on the basis of experimental work in the hatcheries themselves or investigation of particular problems by external scientific co-operation. Criticism has in most respects not been directed against planting and re-stocking in general but against indiscriminate planting without regard to the natural characteristics of the waters planted. The fact that many successful plantings have from time to time been made has only a partial bearing on the situation. Moreover, criticism has not been directed against the hatching process by itself, because, with minor exceptions, it has been shown that where female fish are capable of being stripped eggs can be obtained, fertilized and hatched through to the fry stage in practically unlimited numbers. It has been directed rather against the procedure of transferring young raw fry to natural waters without proper consideration of the risks of physical injury, the existence of natural enemies, and the necessities of food supply, and therefore by inference against uncritical routine as opposed to effective technical control.

From the point of view of hatchery organization, the articulation of scientific and technical work with the processes as carried out in the hatcheries and in re-stocking operations has everywhere been a matter of difficulty. The reason is that hatchery work has been conducted from the beginning, over sixty years ago, on a more or less routine basis, though not perhaps to the extent that many imagine, because as a matter of fact fish cultural work has attracted the attention of many exceptional men and most of the difficulties have been removed and the process improved by experimentation of a very practical kind carried out in the hatcheries themselves. On the other hand scientific effort of a kind which might be helpful to hatchery work and allied operations has been developed mainly in the laboratories of the universities, and has not in general been closely articulated with fish cultural practice. The result has been a sort of detachment by which fish cultural work has not advanced to the stage of a technical science, while scientific co-operation continues to be arranged on a more or less divided and accessory basis.

It is perhaps unnecessary to point out here that as regards the Province the problem in respect of improved technical relations is in a fair way to be solved. Since 1925, the Provincial fish cultural service has been modified and more or less re-organized by the addition to the service of a technical officer, and the opportunity has thus been afforded of building up a branch of the service to be devoted to survey and control purposes. Since 1921, also there has been developed within the Department of Biology of the University of Toronto the Ontario Fisheries Research Laboratory which has already conducted a number of survey investigations, and the operation of which has recently been placed on a proper financial footing through co-operation of the Provincial Government. These and other agencies will be discussed later in connection with the general question as to how the various elements available for scientific fisheries investigation may best be brought into mutually helpful relation.

As hinted above, the question as to the method of operation of the fish cultural service and of such technical control or investigation as can be brought into relation with it is only a part of the general question as to how hatchery practice and allied operations can be improved along game-fish lines. It should be remembered in the first place that the Provincial hatchery system consists of a rather complex and elaborate plant, the physical condition and capacities of which depend for the most part upon the nature of its historical development at first under Dominion and later under Provincial auspices. The system has the normal obligation not only of game-fish production but also of all commercial fish production carried on in or for the Province. An important point to consider more especially from the point of view of present and projected expense, is that as late as 1926, the Dominion Government definitely abandoned fish cultural operations in Ontario, and thus left to the Province a suddenly increased obligation in the matter of hatchery operation. Increased game-fish production is again a newer issue in the sense that although game-fish work has been not only continuously a component of hatchery operation but also the original foundation of it, the game fish interest has lately become a major consideration, and as a result the Province is practically in the position of being urged to assume a further obligation which so far as can be seen will demand considerable new construction as well as new facilities in the way of rearing, retaining or spawning ponds and extensions otherwise of the fish cultural service.

Service Organization

There appears to exist, variously throughout the Province, so far as represented to the Committee, some feeling of dissatisfaction concerning game and fisheries in general, both on the score of the public relations of the Department and on the basis of its working arrangements. There is on the other hand a great deal of acknowledgment of the difficulties of the situation and of the efforts of the Department to meet them.

While as previously mentioned many phases of this situation are such as belong properly to the administrative authority, and do not concern the work of the Committee, except in so far as they reflect a more general public view of influences affecting game-fishes and game-fishing, the Committee believes that there are several points upon which helpful suggestions may be made. On these points the Committee offers no recommendations, calling attention to them simply as matters to which consideration might with advantage be given. They refer in the main to the position of the Department as a branch of the Provincial service, public relations of the Department, and the ubiquitous question of the effect of external influence on service efficiency.

RELATION TO GOVERNMENT ORGANIZATION

From the point of view of effective service organization rather than administration in a general sense the proper alignment of either game-fish management or of game and fisheries management with other branches of the public service has apparently never been a matter of very close agreement. In various parts of the world, game-fish management has been variously associated with fisheries generally, agriculture, forestry or combined services representing conservation, depending apparently in part upon natural alliance and in part upon historical development or local requirement. There is, however, very general recognition of the fact that various natural resources which have to do with plants and animals in a broad way have overlapping interests and therefore should not be administratively handled in water-tight compartments or in an isolated fashion as regards service requirements.

In Ontario the attachment of the Department of Game and Fisheries to the Department of Mines appears to have been founded upon administrative convenience rather than upon natural association, and the question has been freely discussed in public as to whether this Association is in any way disadvantageous to the fisheries service. The Committee has been gratified to observe that wherever in the Province adverse comment has been made concerning the combination of Game and Fisheries on the one hand with Mines on the other it has been coupled with the expression of respect and appreciation for the services rendered to fisheries interests by the present Minister. The general impression appears to be that no constructive purpose can be served by the combination of two such divergent services, and that while it might be a wrong inference to conclude that the services suffer in that respect, it is at least a reasonable prospect that game and fisheries service would enjoy more rapid development under separate auspices.

The natural alliance between game-fish interests on the one hand and forestry interests on the other hand has been commonly discussed in this relation. Practically every phase and ramification of the work of the Department of Lands and Forests along the lines of timber, pulpwood, forest reserve, fire protection and reforestation has a distinct bearing upon game and game-fish conservation.

It has been suggested also that Ontario should adopt the plan of natural resource service represented by the various State Conservation Commissions in the United States' Having had at least some opportunity of making enquiries as to the way in which service arrangements work out on that basis, the Committee has been favourably impressed with certain advantages commonly shown, namely, the more direct public co-operation which is possible under a Commission form of management, and further the more co-ordinated control of field officers for forest, game and fisheries protection service. At the same time, it is realized that in Ontario we have a very different situation as regards service requirements, inasmuch as there is a very large area of wild lands to administer, a correspondingly large obligation to meet in the matter of protective service and control of basic industrial development, and therefore greater ramification and independent organization of the various service units.

Under the circumstances now existing and in view of the fact that the two major Departments of Mines and Lands and Forests already have heavy obligations in respect of the public service, which obligation may be expected in future to be substantially increased it would appear to be worthy of consideration that the present Department of Game and Fisheries, the work of which is also likely to be greatly expanded, should be made a major Department and so placed under the charge of a separate Minister who would be able to give full time to its requirements. In view of the fact that the matter has only a minor relation to the work of the Committee, and the probability that many other factors are involved besides those above-mnetioned, it will be sufficient to state that the change here suggested would unquestionably meet with the approval of a large body of sportsmen.

Public Relations

As regards the external relations of the Department from the point of view of their possible effect upon game-fish conservation, the Committee believes it to be advisable to point out some difficulties of the situation which appear to be unavoidable, but with the object of endeavouring to make clear that in order to have a proper atmosphere helpful alike to the Department and to the public, there must exist some mechanism by which the effects of less fortunate circumstances may be counterbalanced.

For example, a branch of the Government service charged with the onerous and at times perhaps unpleasant task of collecting license fees and royalties, or of maintaining law enforcement with the usual accompaniments of prosecutions, fines and confiscations, will certainly not receive acclaim in all quarters, and will not enjoy any particular sentiment of general support until public fancy, public pride, educated opinion, or appreciation of service rendered results in public acknowledgment. There are of course plenty of individuals who are ready at any time to complain because their private interests have been affected, and there are law-breakers of several categories, some, for example, of whom nothing else may be expected, and others to whom game laws do not represent more than a lightly regarded conviction or responsibility.

The importance of building up public sentiment favourable to any Government service is everywhere admitted, and conversely the lack of such sentiment is usually most evident when service operations are not conspicuously in the public eye. A good illustration of this may be seen in the case of the fish hatcheries. Those who are acquainted with the historical development of these hatcheries in the Province know that they have been built up by progressive stages into a rather comprehensive system. But if we compare hatchery service, keeping in mind the hatchery buildings, locations and the ordinary operations of the fish cultural branch, with other services, it will be seen that they are not in the public eye in any way comparable to such services as highway construction, public works, or public health. There is an enormous difference in attitude between the man who casually hears of fish hatching, is only concerned about a few days perhaps of sport, is not concerned about Government relations to it except as a matter of regulation, and the man, let us say, who with the inconvenience of a license or two and some taxes is able to enjoy fine roads for practically 365 days in the year.

The fact that our hatcheries are not likely to attract public notice has at various times been commented upon, and for this reason the Committee could not fail to observe and to be impressed by the fact that variously in the United States and especially in Pennsylvania this matter has already received a great deal of attention, for the hatcheries are likely to be show places, and in this respect, doubtless with the expenditure of a good deal of money, have been placed in the position where they command public notice and with it public pride and support.

Comments are numerous throughout Ontario, also among residents and non-resident summer tourists, as to the general scarcity of public information concerning game-fish and game-fish regulations. Some years ago, the Department of Lands and Forests inaugurated a system of posting throughout the northern area rather striking notices designed to assist fire prevention. The specific value for their purpose and also the general educational value of these notices has been generally recognized. The fact that the traveller in the wild places comes upon one of these notices every now and then is a striking and convincing reminder—one of the few reminders from the point of view of the non-resident—that we have a public service looking after conservation. The idea is an important one from the point of view of the game-fishes, and one which again the Committee has brought to its attention in the United States. The fact in general is that apart from some formalities in the way of purchasing permits, the tourist is being turned loose in hundreds of square miles of territory in which in most respects there is very little indication of a managing public service.

So far as represented to the Committee, however, there is another phase of the situation which appears to be still more significant. The impression has somehow gained ground that the practical requirements of game-fish protection and re-stocking are suffering because of the lack of desire on the part of the Department to co-operate with external agencies. This is not a matter of complaint, but the expression of a sentiment that a great deal could be accomplished if done in the proper spirit and in the right way.

While a great deal of allowance should be made for the fact that the Department must in the last analysis rely on its own responsibility as regards all its protective and re-stocking arrangements, cannot afford costly errors, and is never quite in a position to accept without question the suggestions made to it, there appears to be no doubt that a great deal could be done to establish friendly working arrangements.

For one thing, more direct contacts could be established. This might readily be accomplished through personal visits of senior officers of the Department to local associations, local public conferences, preparation and circulation of good literature bearing upon the service operations of the Department, upon natural history of game animals, fish culture, conservation and similar matters, including perhaps tourist trade information, but not the extravagant misrepresentations often characteristic of that class of publication. For more immediate purposes of contact with local bodies and for the better development of conservational sentiment, it would not be out of the way to suggest the appointment of a special publicity officer. In this case it would be important to realize that we do not need publicity in the ordinary sense but organizing of means of public contact, and that the person selected should by education and technical training be able to act as a service representative of the Department.

Mention may also be made of the fact that in any service organization where the men engaged come into frequent and close relation to the people therein, the service comes to be directly and helpfully regarded. Doubtless in course of time the technical organization of the Department will proceed to the extent that there will be a number of local field officers, not of the nature of overseers, and a closer relation of the local protective service to local associations in which event the common interests and outlook would naturally be recognized and much of the feeling of isolation now apparently existing would disappear.

DESIRABILITY OF INDEPENDENT MANAGEMENT

Representations have been variously made to the Committee to the effect that political influence may or some times does interfere with the effectiveness of protective service to the detriment of game-fish conservation. The information on this point is indefinite and in general unsatisfactory. It must, of course, be borne in mind that suggestions of this kind are commonly made with respect to Government service here and elsewhere, and that such suggestions may be construed in different ways.

Whether or not within its proper functions, if specific cases of presumed political influence had been available to the Committee the latter would have been obligated to bring the matter to the notice of the Honourable the Minister in charge of the Department. In view of the fact, however, that no specific instance has been presented to the Committee, such as could have been treated in this way, or what is more to the point in the present enquiry, could have been looked into as possibly having a bearing on game-fish depletion, the Committee restricts its comment to one or two broader aspects of the situation.

There doubtless exists in the public mind some anxiety lest the effectiveness of the departmental service, especially along protective and law enforcement lines, may suffer from lack of independence as regards partisan representations. This sentiment is associated with a conviction that such interference is critical, in the same way as might be considered by other groups of interests or citizens generally concerning other branches of Government service, notably perhaps education or public health. Whatever form of management could be employed which would protect the Department in the process of carrying out the law or working in the interest of game-fish management, and more especially of removing out of the reach of interested individuals the temptation of trying to make use of personal or party affiliations, would obviously be desirable and advantageous.

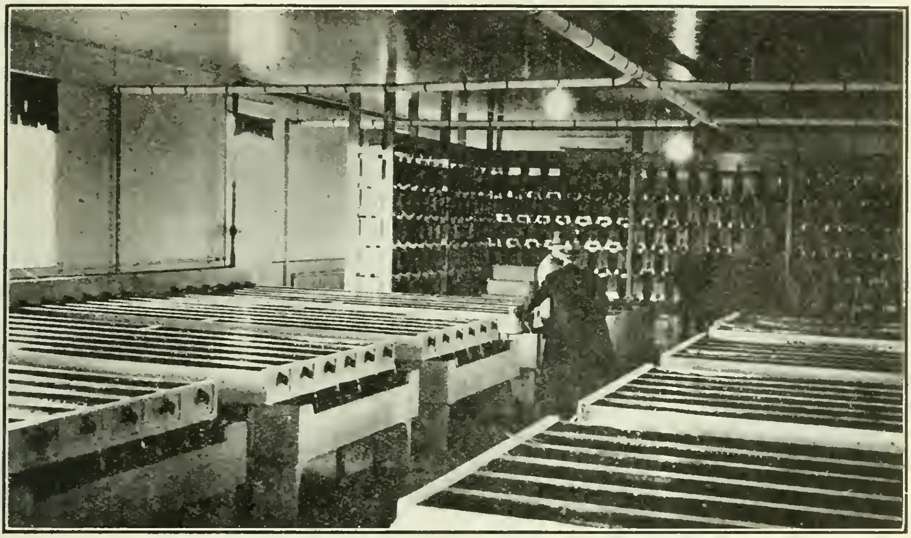
Without, therefore, placing any construction on conditions as they may exist at present, the Committee is in accord with certain broad principles enunciated by the Ontario Federation of Anglers and others, and, it may be added, by the Commission of 1911, as well as various bodies and individuals at different times, to the effect that the entire management of game and fisheries should be so organized as to be outside of the range of political manipulation of any kind, without however withdrawing from the Government the full measure of responsibility. This suggestion, it will be observed, is simply a recognition of an apparently widespread conviction that an independent type of management is in every respect desirable.

ARTIFICIAL PROPAGATION AND RE-STOCKING

Artificial propagation is a well established process. It has been carried on as a public service in Ontario since 1868 when the Dominion Government began the organization of the hatchery system. This system was developed for many years purely under Dominion auspices, but is now entirely under Provincial control. It includes at the present time the bass ponds at Mount Pleasant and some sixteen hatcheries, situated at Mount Pleasant, Glenora, Sault Ste. Marie, Normandale, Normandale Creek, Port Carling, Port Arthur (2), Fort Frances, Collingwood, Wiarton, Kenora, Sarnia, Southampton, Kingsville and Belleville.

In the course of the present investigation the relation of these hatcheries to game-fish conservation has been very generally commented upon. The necessity of producing more game-fish has been clearly demonstrated. The question as to whether the hatcheries are able to accomplish this increase in production has been widely discussed, and there is a great deal of uncertainty as to just how far the Province might reasonably go in the matter.

A study of the hatchery system and fish cultural processes indicates that there are several principal matters that should be considered. They are (1) the origin and present outlook of the hatcheries as regards game fish; (2) the development of rearing ponds; (3) spawning ponds, and (4) retaining ponds as accessories to hatchery buildings; (5) the propagation of native species as opposed to introduced species; (6) the methods of transfer from the hatcheries to public waters; (7) the problem of successful planting, and (8) the requirements of preliminary scientific survey. In addition to these, there are the closely related matters of (9) the necessity of closure; (10) the utilization and establishment of sanctuaries; (11) the status of aquiculture and (12) the public aspects of private fish culture.



Interior, Ontario Government Hatchery, Port Arthur, Ont.

1.—Origin and Present Outlook of the Hatcheries

Increased production and distribution of game-fish, if carried out in any very extensive way as a sort of major policy in Ontario, will assuredly call for numerous changes and extensions in relation to the present plant. For this reason, it is important to know the composition of the Provincial hatchery system, to judge its physical condition on the basis of commercial and game-fish production, both of which are current obligations and to ascertain what possibilities and limitations are represented in part by the peculiar development which the system has had as a result of both Dominion and Provincial operation. It is obviously this particular foundation which should be the starting point of any plans for future extensions or changes.

Referring first to the times or dates of establishment of the individual plants and the relation to them of Dominion and Provincial participation we have the following data: (D) signifying Dominion establishment and (O) Provincial establishment or time of taking over:—

D	1868-73	Newcastle (discontinued).
D	1876	Sandwich (discontinued).
D	1890	Ottawa (discontinued).
D	1900	Quinte Bass Ponds (discontinued, 1913).
D	1908	Wiarton (O. 1926).
D	1908	Sarnia (O. 1926).
O	1911	Mount Pleasant Bass Ponds.
D	1912	Collingwood (O. 1926).
D	1912	Southampton (O. 1926).
D	1912	Port Arthur (O. 1926).
O	1914	Mount Pleasant.
D	1915	Belleville (O. 1926).
D	1915	Kenora (O. 1926).
D	1917	Kingsville (O. 1926).
O	1917	Normandale.
O	1918	Port Carling.
O	1918	Port Arthur.
O	1920	Fort Frances.
O	1921	Sault Ste. Marie.
O	1923	Glenora.

The data above-mentioned indicate clearly the original control of hatchery practice by the Dominion Government, the gradual participation of the Province, and the final withdrawal of the Dominion Government (1926) from hatchery operations in Ontario.

The respective development of game-fish and commercial fish work on the part of Federal and Provincial authorities may next be summarized as follows:—

1868-73	The Dominion Government initiated hatchery practice beginning with salmonoid fishes (including lake and speckled trout).
1898	Privy Council reference gave Ontario administrative control of licensing and revenue.
1900	The Dominion Government acquired the Quinte bass ponds for bass distribution.
1901	Province began distribution of bass.
1908	Province began to raise fingerling bass.
1911	Province completed first bass ponds at Mount Pleasant.
1913	Dominion Government abandoned game-fish distribution in Ontario, including Quinte bass ponds.
1914	Province built Mount Pleasant hatchery for "trout."
1915	Province distributed, in addition to bass fingerlings, speckled trout fry and lake trout fry to game-fish waters.
1917	Province built Normandale hatchery for whitefish and herring, thus beginning work on purely commercial fishes.
1918	Province built Port Arthur hatchery mainly for commercial fish.
1926	Dominion Government withdrew from commercial fish culture in Ontario.

This summary taken in conjunction with data given in the preceding table shows:—

(1) The Dominion Government initiated hatchery practice, expanding gradually in commercial fish work with moderate attention to game-fishes.

(2) From about 1900, the Province developed its game-fish distribution proceeding a step at a time from adult to fingerling bass, to speckled trout, to lake trout in game-fish waters, and finally extended operations to include all commercial fish.

(3) The Dominion Government withdrew first from the game-fish work and finally from the commercial fish work.

The final result of this whole development may be judged from an analysis of the production figures of the report of 1927.

These figures indicate total distribution as follows:

Maskinonage fry and fingerlings	68,000
Whitefish fry	448,789,750
Pickerel fry	223,945,000
Salmon trout fry and fingerlings	21,465,375
Herring fry	18,410,000
Speckled trout fry and fingerlings	1,444,050
Black bass fingerlings	5,425
Parent speckled trout	606
	714,128,206

Spawntaking at Normandale, Ont. Speckled trout.

It will be borne in mind that the significance of these figures on the game-fish side depends upon the waters to which distributed whether restricted to game-fishing or not, and the fact that otherwise commercial fish (lake trout, pickerel), become game-fish when distributed to waters in which commercial fishing is not permitted.

The following approximate computation is made on the basis of the following categories.

(1) respective numbers of individual game species, speckled trout, bass, maskinonge; (2) total game-fish, speckled trout, bass, maskinonge; (3) total game and semi-game fishes (lake trout, pickerel) distributed to game-fish waters (no commercial fishing in these waters), (4) commercial fish (including lake trout, pickerel) distributed to commercial waters, and (5) total young of game and commercial fish as distributed.

The comparative figures expressed as percentages are as follows:

Case 1:

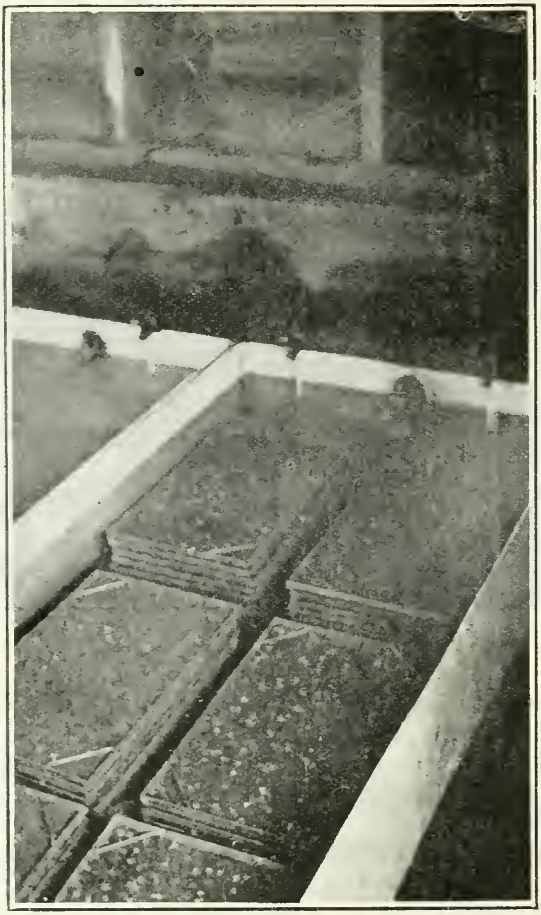
Individual game species:	
Bass	0.36
Speckled trout	95.16
Maskinonge	4.48
Total game species	100.00%

CASE 2:

Purely game-fish	0.21%
Other fish	99.79%
Total all fish	100.00%

CASE 3:

Game and semi-game-fish to game-fish waters	4 %
Commercial fish to commercial waters	96 %
Total all fish	100 %



A few million speckled trout eggs immediately after
artificial fertilization at Normandale
Hatchery, Ontario

In considering these figures a very great allowance must be made for the fact that the eggs of commercial species can be obtained and hatched in very large numbers, and further that the process of planting, at any rate, as practised, is relatively direct. The difficulties attending the handling of game-fish should be appreciated in any comparison which is made. Nevertheless the analysis shows that game-fish production has not been of major importance in Ontario, and that the development has been rather consistently in the direction of commercial fish production.

In view of the gradual and in all probability natural and necessary transfer of fish cultural practice from the Dominion to the Province, it is perhaps useless to discuss what the trend of conditions might have been otherwise. Had the Province continued the game-fish work which in some ways it originated, and had the Dominion continued commercial hatchery operation, it is likely that great progress would have been made along game-fish lines, and the present impasse which has developed as a result of the sudden predominance of game-fish and tourist revenue interest would have been avoided.

As regards the extent of game-fish propagation in Ontario, comparisons have been made with the neighbouring United States. The following tabular statement places side by side the respective output of Ontario as compared with Pennsylvania, New York and Michigan:

DISTRIBUTION OF FISH FOR PLANTING AND RE-STOCKING, 1927

	Ontario	Pennsylvania	New York	Michigan
Speckled trout.	1,440,050 606 adults	S 1,275,385 (4″-12″) F 791,617	S 6,776.525 F 1,414,490	S 22,071,333 F 658,550
Brown trout.	0	S 43,060 (4″-12″) F 188,998	S 1,781,922 F 3,250	S 5,910,359 F 10,500
Rainbow trout.	0	S 0 F 305,300	S 565,094 F 151,600	S 4,326,991 F 187,950
Small-mouthed black bass. .	5,425	S 532,900 (2″-6″) F 0	S 657,700 F 6,450	S 379,305 F 119,803
Large-mouth black bass. . . .	0	S 0 F 8,330	S 0 F 880	S 721,188 F 6.000
Maskinonge.	68,000	S 0 F 0	S 6,200,000 F 0	S 0 F 0
Pickerel (pike perch).	G 27,145,000 C 196,800,000	S 51,873,400 F 0	S 107,721,000 F 0	S 58,625,000 F 25,800,000
Lake trout	G 2,000,000 C 19,465,375	S 0 F 50,000	S 325,050 F 1,675,450	S 3,414,690 F 23,090,500
Whitefish.	448,789,750	S 1,500,000 F 3,000,000	S 19,498,000 F 37,800,000	S 20,395,000 F 31,400,000
Cisco.	18,410,000	S 20,660,000 F 6,080,000	S 37,396,000 F 106,960.000	S 7,000,000 F 7,000,000

In the above table: S = State distribution; F = Federal distribution. In Ontario: G = distribution to game-fish waters; C = distribution to commercial fish waters.

This computation does not set forth the very important difference as regards planting relative large numbers of fry as opposed to smaller numbers of fingerlings, yearling or adult fish. In planting trout, for example, Pennsylvania concentrates upon the distribution of 4″-12″ fish.

These figures are illuminating, but in making comparisons as between Ontario and these States, allowance should be made for the fact that Ontario has the sole responsibility for both commercial and game-fish propagation, while in these States the work is divided between State and Federal authorities. Furthermore, Ontario is accountable for service covering the whole of the international boundary water of the Great Lakes on the Canadian side, which service is divided south of the boundary among several States.

The striking fact is, however, that in a group of States long since exploited from the standpoint of game-fish possibilities, and now largely in the reconstructive phase, game-fish propagation is being systematically and intensively prosecuted. There is not only a thorough appreciation of the value of the work but also various technical accessories and refinements have been introduced to make it more successful. Since Ontario is likely to go through similar phases, however modified by newer conditions of game-fish or tourist demand, active development of game-fish propagation does not seem to be open to question.

In reviewing the present situation as regards the Provincial hatcheries, the Committee came to the conclusion that while a good deal of game-fish handling can be done in the existing plant, development has taken place so definitely towards the commercial side, as shown both by production figures and also by examination of the buildings and sites, that it would be better to consider the game-fish work for the most part as a new development. The principal facilities available now refer in the main to the Mount Pleasant Ponds, Normandale Creek, Port Carling Hatchery for pickerel and various interchangeable accommodation for lake and speckled trout.

If much progress is to be expected along game-fish lines in the next few years, it will be necessary to make a rather thorough re-survey of the Province from the point of view of new sites, where provision can be made for external construction, equipment and accessories appropriate to game-fish work.

In recommending the adoption of a policy of rapid expansion of game-fish propagation, the Committee would append the reservations suggested in the introductory section, namely, that extention of the hatchery system should be accompanied by thorough examination of the natural waters of the Province and attention to the provision of rearing ponds and other accessories now recognized in practice, so that the product of the hatcheries may be distributed and planted with reasonable hope of success.

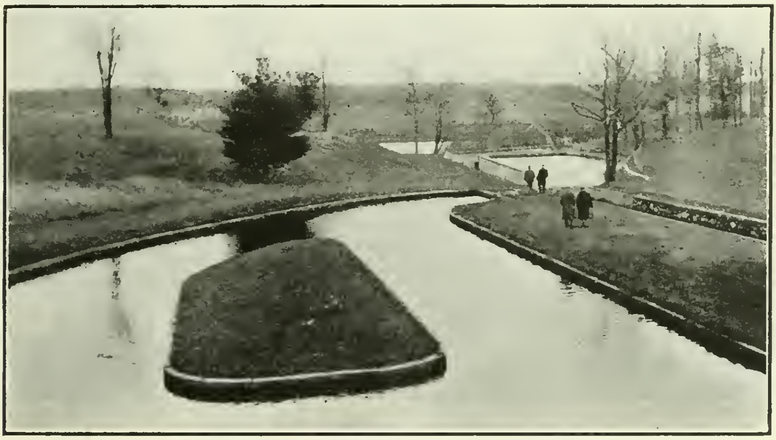
In connection with the matter of new hatchery service and sites, the Committee has received a number of recommendations and requests. Since the publication of a list of these suggestions would for obvious reasons not be in the general interest, it may be observed, partly by way of acknowledgment, that such information as has been received will be placed in the hands of the Provincial authorities.

2.—Rearing Ponds

By this term is meant enclosures, natural or artificial, cement or wooden structures, semi-natural or modified stream runs, which may be used for the artificial retention and feeding of young trout from the stage at which they have to be removed from the hatchery troughs to the time when they may be distributed.

At the present time in hatchery practice generally, trout are handled at all stages from the green eggs to the adult fish. A preference is being shown which may be described as a tendency to avoid planting eggs or fry, and within reasonable limits of convenience and expense, to work in the direction or distributing fingerlings, large fingerlings, small fish of five or more inches at the end of the first summer season or beginning of the following spring, or two or even three year old fish. This practice has apparently been worked out mainly on a basis of experience, but is in line with current scientific criticism of the fry planting operation.

In this practice, the growth of the fish from the fry stage is accomplished through the use of the rearing ponds. It may be noted as important in this discussion that the easiest and least expensive way to handle young trout is to distribute them in the fry or small fingerling stage, in general to use only the interior or trough facilities of the hatchery building. Rearing ponds are a more expensive addition but in the opinion of fish culturists are necessary for growth and control purposes. There has been no particular development of these ponds in Ontario, except at Normandale Creek, though they are common equipment in connection with United States hatcheries.



An artificial pond gradient at Michigan State Hatchery, Paris, Michigan

In many cases, these ponds have been developed at considerable cost as artificial cement structures. The State hatchery at Corry, Pennsylvania, has 106 cement ponds, while the State hatchery at Hackettstown, New Jersey, has 168 cement ponds of a total surface area of 119,000 square feet. Such ponds or tanks are undoubtedly of great service because they bring under control all the factors of water supply, circulation and rounding up of the fish that are necessary for feeding, sorting, grading or sanitation.

In other cases, less costly pools and runways are being used. They are produced by artificial ditching of spring runs and similar devices, and these ponds, while obviously less controllable, have the reputation of being fairly satisfactory for the purpose.

In the opinion of the Committee, one of the first improvements to be thought of in connection with the Provincial hatcheries is the provision of these ponds. Very little construction may be expected in connection with existing hatchery sites. In the selection of new sites for ponds, new hatchery construction should by preference be included, though any possible sites available on Government owned property could be utilized if reasonably convenient to hatcheries. In any case, absolute control of a spring source, partial or complete local control of a stream run, physical and chemical examination of the water, including temperature control throughout the year, and engineering requirements for volume and gradient should be rigidly checked.

3.—Spawning Ponds

By this term is meant water enclosures of appropriate dimensions, excavated or banked ponds, suitable for spawning of small and large-mouthed black bass. The artificial culture of these species, and the continuous use and method of management of such ponds, is now an established practice, and, as pointed out elsewhere in this report should be greatly expanded in the Province.

Michigan State Hatchery, Paris, showing the utilization of a flat area of moderate gradient and spring supply for layout of ponds and runs.

4.—Retaining Ponds

These are ponds, excavated or produced on natural runways of spring origin or spring component, used for older stages of parent stock or either trout or bass. The construction or improvement of this type of pond, which may be supplemented by natural bodies of water, will have to be greatly extended in Ontario in order to give freedom and leeway to the handling of older fish, mainly for propagatory purposes.

In this connection, and in view of certain criticisms that have been made concerning bass propagation in the Province, the Committee has made enquiries especially as to the control and handling of adult bass. There appears to be fairly general agreement that parent bass may be taken in the early spring from the wild state and successfully nested, but also that better control can be exercised by retaining these fish over winter, in which case the fish are more thoroughly acclimated, parasitization may be checked up, and temperature conditions, necessary to spawning, can be conveniently maintained. The relation of adult bass to supply of fry in semi-supervised lakes will be discussed in a later section.

5.—Native and Introduced Species

There is at the present time in Ontario and elsewhere considerable difference of opinion as to whether the game-fish which are to be propagated should be exclusively species native to the waters, further as to whether in the case of species native to the waters, transfer should take place from one region to another in which conditions are climatically or geographically different. In former years, a great deal of indiscriminate planting was done because foreign species, known to be good game-fishes, were desired or fancied, and without any particular consideration of the greater desirability of encouraging native species or protecting them against undue competition. Pennsylvania, for example, concentrates upon speckled trout, the native species, while New York and Michigan propagate extensively not only speckled trout, but also the brown or German and the rainbow trout with different degrees of protection for the native species as regards original and modified characteristics of the respective waters in which the various species are planted.

In Ontario, all three species are in some way represented in natural or public waters, and already the situation as regards their general desirability is somewhat confused. Rainbows ("Rainbow" Steelhead), for example, have invaded the lake waters in the region of Sault Ste. Marie from United States plantings, and have extended eastward into the North Channel and northward or northwestward along the Superior shore. These fish are generally held in high esteem. From what the Committee has been able to learn in this region they are not credited with injurious action upon the native speckled trout. Both rainbow and brown trout have been propagated by the Province, and there have been private plantings with subsequent escape of the fish into public waters.

In all probability the cultivation of the introduced species in the Province is desirable, but indiscriminate hatching and planting are not. We should have, at least in the southern or southwestern part of the Province, and probably throughout, a definite "trout policy," and the regulation respecting the taking or use of fish for stocking should be framed so as to prohibit the planting of non-native species in any other way than under the direct supervision of the Department of Game and Fisheries.

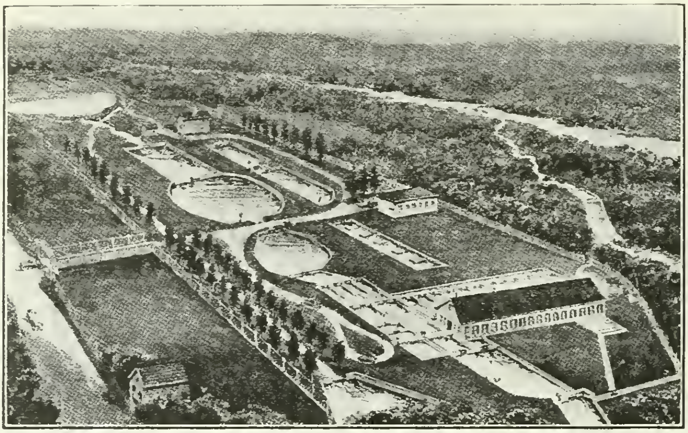
So much doubt has been expressed regarding the desirability of brown trout that the further propagation of this species should be given careful consideration before further planting is done.

In addition to the question of native and non-native species, there exists in the Province considerable feeling against the transfer of eggs, young or adult fish, especially of speckled trout from points outside the Province or from remote regions inside the Province. In all probability this sentiment is mostly a matter of local pride, but in view of the manifest differences of a physical nature existing as between different regions, more thought should be given to the probability that in a given region the fish most likely to thrive will be those of local origin, the relation of these in an hereditary sense having already been established.

6.—Transportation

The successful transfer of fish at whatever age is an essential part of the stocking process. It requires continuous attention and a great deal of foresight. Fish require continuous oxygenation, are extremely sensitive to temperature changes, and the surface layer of the body while resistent to touch is so delicate that even a slight abrasion or adhesion to a dry surface may easily result in fungus infection developing later but undetected either during transfer or at planting. Unless the transfer and planting are carried out expeditiously and by experienced men, survival is likely to be at best a matter of chance. Good equipment and means of transportation are essential.

Unless the ordinary facilities of railway express cars are relied upon for carrying cans and attendants, a method which has many disadvantages, the practice has been to use special railway cars fitted with tanks or with accommodation for cans, and with accessory facilities for ice, compressed air, and living quarters for the crew. This method is now being supplanted by truck transportation which has many advantages. Aeration is assured without special effort by ordinary road vibration. There is direct contact both with the hatchery and as a rule with the place of planting. Continuous, practically non-stop passage for long distances is possible, while comparative figures of cost demonstrate that truck transportation is relatively much less expensive than railway transportation.



Paradise Brook Trout Co., Cresco, Pa. Layout of Hatchery Buildings, Ponds and Water Supply.

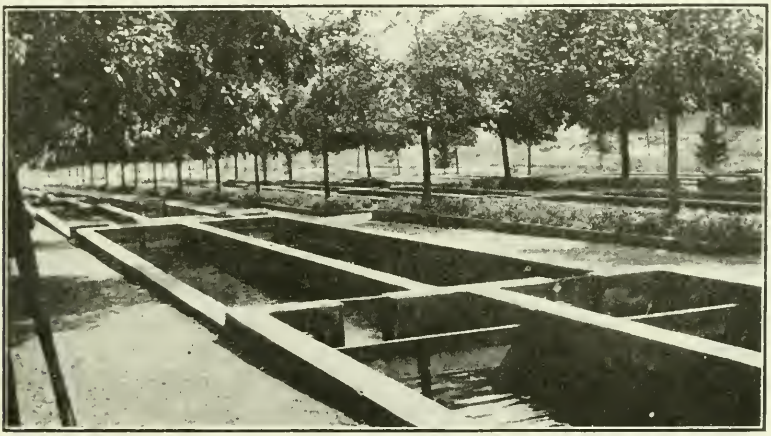
In Ontario, as will be seen from the reports published annually by the Department of Game and Fisheries there has been in previous years a relatively large and varied distribution of fish of different species, fry, fingerlings and adults, and it appears that the Department has had to rely mainly upon facilities furnished by the railways and upon the tank car "Beaver" which was originally remodelled for the purpose but is now in a dilapidated condition and has been condemned. The Committee understands that a new car is in prospect, the addition of which to the equipment would appear to be very important to the Department's work.

It may be observed that in the States visited by the Committee and where in most respects the distances to be travelled, while considerable, are not so great as would be the case in Ontario, there is still a good deal of anxiety as to possible injury to fish in transportation. It is a phase of the propagatory work that needs very careful handling, and the question as to how far the truck method might be used in Ontario, not for more ordinary transfers, but for long range planting, is worth consideration.

At the present time, the Province is engaged in highway construction on a large scale. It may be assumed that in addition to the facilities at present available for tourist movement, our highways will make older tourist resorts more easily accessible and will greatly extend the accessible water areas towards the northern and northwestern sections of the Province, with consequent deterioration of the game-fishing. Under these conditions a truck transportation system which would, so to speak, meet the motor traffic on its own ground might be of inestimable value in maintaining supply.

7.—PLANTING

The placing of fish, especially of young fish produced under artificial conditions in the hatcheries, in natural public waters requires a great deal of care and foresight. As a step in the propagatory process, planting is highly important. It will be generally understood that no expense in the maintenance of hatcheries would be justified, and no amount of egg-hatching or reporting of numbers distributed would have any significance if planting operations were not carried out in such a way as to insure that a considerable percentage of the young would grow up and reproduce their kind.



Cement construction of ponds at the New Jersey State Hatchery, Hackettstown, N.J.

Current criticism of hatchery operation is neither directed at the hatchery process nor at re-stocking in general, but at the practice of fry planting and on the score of its results. There is a good deal of confusion in the situation, leading to opinions both plausible and unconvincing relative to success or failure of planting operations.

The basic requirements of successful planting would appear to be, first, that the fish should be in good condition on arrival at the place of planting, second, that they must be adjusted to the temperature conditions of the water, third, that they must be placed in waters which are known to be biologically suitable, and, fourth, that they must be liberated in situations where they can meet the first requirements of food supply and evasion of enemies.

As to how these conditions have been or can be met, it may be pointed out:

(*a*) Considering the billions of eggs that have been hatched and distributed in Ontario in the past sixty years, comparatively little information has been reported as to results.

(*b*) In view of the fact that many, if not most, of our older waters have been continuously fished and occasionally planted, thus confusing the general situation, every specific case of planting or re-stocking which was a conspicuous success or a definite failure should be looked up in the records, separately tabulated and an attempt made to ascertain from the investigation of the waters themselves the probable causes.

(*c*) In addition to the usual practical arrangements for the distribution of fish, there should be a scientific or technical inspection of the conditions of planting. This inspection, if superficial, is not likely to be of more than very moderate value.

(*d*) Results are likely to depend to a large extent upon the age at which planted. At the present time, maskinonge and pickerel have to be planted in the fry stage. The concensus of opinion is that trout and pass should be planted in late fingerling or older stages. The respective abilities of hatchery reared fish to take care of themselves when planted in natural waters at different ages have not been adequately demonstrated, though both on experimental grounds and from practical experience fry planting is in disfavour.

(*e*) The factors determining suitability of waters for planting purposes are too intricate and the water areas too varied to permit of thorough inspection at the time of planting, and should, therefore, by the adoption of survey methods, be studied in advance.

Several possible sources of failure and of economic waste in fish planting are currently noted by fish culturists as commonly associated with Government distribution. The most important of these is the distribution of fish to public waters on personal application of individuals, who may not be able to supply the accurate information called for in the forms of application provided, who may demand fish for waters quite unsuited for them, or for waters already stocked. In such cases the possession by the authorities of information independently acquired and recorded concerning the waters is essential, while the service arrangements should be such that refusal to fill applications would not be open to question if based on technical grounds.

A second defect arises from the hitherto common practice of delivering fish which would be planted by individuals not conversant with the proper procedure. In view of current doubts as to the success of planting operations, it is unlikely that indiscriminate planting by uniformed individuals will be continued anywhere, more especially in public waters, the planting of which should be carried out solely by Government officers, or by individuals, known by the Department to be capable of properly executing the work.

8.—Survey Requirements

Mention has already been made above to the necessity of having at hand scientific and technical information concerning the natural characteristics of our waters. Such information is an important adjunct to planting operations and is also fundamental to other phases of game-fish conservation. It is the type of work usually designated as "survey" and consists in the collection and recording of data and mapping of any area under consideration as regards its physical, chemical and biological peculiarities.

In the adjacent United States survey work was in most cases organized as State service years ago, and more recently has been developed in connection with the particular modern requirements of branches of the State service, including game and fish regulation, with the co-operation in many cases of the scientific laboratories of the State Universities and other institutions.

Taking into consideration the extent of land and water areas in Ontario and the magnitude of the task involved in completing the necessary investigations, comparatively little work of this nature has been carried on in relation to game and fish conservation. On the game-fish side, however, the necessary foundation was provided by the Provincial Government in 1925 through the selection of a biologist for the supervision of fish cultural operations including the study of the suitability of waters. The development and extension of this type of service, with its available adjuncts, will likely give rise to a stable organization for survey and other fish cultural purposes in the Province. It should be pointed out, however, that there is already abroad some expectancy that the whole matter of the suitability of waters for fish planting can so-to-speak be determined at a glance. This sentiment can only result in disillusionment. It would be best to realize that while immediate improvement may be expected in some directions, the development of survey organization adequate to the purpose will be a long and arduous process, and further that as elsewhere explained we are going to have to make up in the future for a good deal of investigation neglected in the past.

Elsewhere in this report the method of organizing survey work to suit modern conditions of game-fish conservation is briefly outlined. But it may be pointed out here that the possession of data of the kind referred to is bound to affect the future work of game-fish planting very materially and therefore that the relation of survey work to fish propagation in general should be given practical recognition.

9.—Closure

The principle of closing public waters to game-fishing has not been applied in Ontario to any great extent. There are two phases of the matter that are important, and in most respects different in purpose, namely, general closure as a public right, and temporary or local closure for the rehabilitation of the supply.

General closure.—At the present time, the prevailing attitude towards game-fishing is that anyone may fish anywhere in public waters subject to restrictions imposed by the regulations. The privilege of a citizen to attach public property in one way or another is looked upon as a sort of inalienable right unless specifically removed by legislation. It does not usually occur to him that the game and fish are public property and in general not to be taken or destroyed.

The Committee observes that in the State of Michigan it has been deemed advisable to protect all the inland game and fish resources of the State by means of a general closure regulation which authorizes the Conservation Commission to close hunting or fishing for a period of five years in the State as a whole or in any local area, with such secondary modification or opening as may be deemed advisable. This measure is similar in operation to certain minor closures which have been made in Ontario for individual land animals. In Michigan the broad applicability of the regulation has apparently been of great value in the direction of giving authority for more general control of factors possibly leading to depletion. It will be observed, however, that it has a still broader implication, namely, as a reminder to citizens generally that the State reserves completely during five year periods at least the privilege of hunting or fishing.

In various discussions which have taken place in Ontario, and more especially at the public meeting held by the Committee in Toronto, many references were made to the necessity of arousing public opinion on game-fish conservation. Public opinion, however, as represented by the sportsmen and conservationists of the Province, can go no farther than to assure the Government that constructive legislation will be welcome. There is still left that element of the people which demands personal privilege at any cost. This element, by reason of disregard of the regulations designed for the protection of fish life, constitutes a real menace by thoughtless or wilful destruction of fish on the spawning beds in spring or fall. It is this part of the resident or non-resident population in any case which is most in need of education and is least likely to profit by it. It is the problem of game-fish piracy which no one, even if conversant with local situations in which it occurs, knows exactly how to solve.

In this situation, the adoption of a principle of general closure might be of effect. It may be taken for granted that even if not put into operation, such a regulation would be strenuously opposed. On the other hand, it would serve the useful purpose of inviting discussion as to who owns the game-fish, and would make clear that permission to take fish is a privilege to be awarded and not a natural right.

Temporary and local closure. Apart from the question of setting aside natural waters permanently as sanctuaries for maintaining stocks of adult fish or production of young, there is the question of temporary withdrawal from game-fishing of public waters for purposes of rehabilitation. In view of the fact that this type of closure has not been used to any great extent in Ontario, presumably because considered unnecessary or because of opposition, the essentials of the process should be considered.

It is a rather remarkable fact that what appears to be a perfectly obvious necessity as applied to land animals. namely, that if large animals are required, time must be allowed for their growth, has not been generally recognized as equally applicable to fishes. It is probable that in all waters over-fished or excessively fished and where the size is gradually diminishing, re-stocking without closure is not likely to succeed more than to the extent of adding to the perhaps already large number of undersized fish.

How the requirements of time for growth, amounting on the average to three years or more can be met, without serious dislocation of the game-fishing or trade dependent upon it is naturally a serious problem. It can, however, be solved by setting aside out of natural lakes, bays which are closed for the purpose, or by a general agreement among local or tourist residents on the basis of which the Government would close the area temporarily. Again a similar result might be obtained by rigorously reducing the number of days per season when fishing would be allowed. The principal consideration, however, is that some such system or policy is necessary, and the need will be quickly demonstrated if the amount of tourist fishing is, as it promises to be, greatly increased. Further comment on the question of closure will be found elsewhere in this report in relation to game-fish sanctuaries.

10.—SANCTUARIES

The sanctuary principle consists in having an area completely removed from public or private use. As applied to land animals the value of the sanctuary can easily be seen, both in the direction of localizing wild animals under conditions of full protection, where they may easily be seen and enjoyed by the public, and for the purpose of utilizing the natural increase for distribution into and population of the surrounding regions. By a slight variation of the principle, the sanctuary may be used as a source of supply from which stock may be drawn by the public service for purposes of re-stocking.

Fish sanctuaries have the same general significance as sanctuaries for birds or mammals, but allowance must be made for the obvious differences implied as between water and land conditions. Fish sanctuaries are negligible as places to observe fish life, and except when they are parts of larger areas with open communication have no value from the point of view of diffusion of the surplus stock into surrounding areas, diffusion in all enclosed or screened areas being prevented by barriers. It is conceivable that there might be fish sanctuaries, on the land or shore portion of which hunting is allowed for the same reason and with the same justice as exists in the case of land sanctuaries where fishing is allowed in the general area. In fact, some public education is necessary along this line, because, while there is a general understanding of the necessity for protecting or saving both trees and land animals in parks and forest reserves of one kind and another, there is conversely a widespread and mistaken notion that the fishing will take care of itself, and therefore no particular concern need be felt about it.

Cement construction of ponds at the Pennsylvania
State Hatchery, Corry, Pa.

In Ontario, in the near future, fish sanctuaries will be necessary for two important purposes. One of these will be in order to give the game-fish of a depleted water an opportunity to grow. It is presumed that this will be a public water in which game-fishing might ordinarily be expected to take place. It would be closed for a period, in the way mentioned elsewhere in this report, as a device for preventing sustained fishing. The second case will be represented by permanent closure, and since a permanently closed water is of no direct value for public fishing, unless connected with a larger body of water, the purpose of having such sanctuaries will be on the basis of the Government using them for stock and supply.

It is practically necessary for the encouragement of both small and large-mouthed bass that such reserve waters be employed. Even now, in many regions, the maskinonge is in a similar position, and as time goes on it is probable that other species, for example, pickerel, may be in the same position.

There are several ways in which reserve waters may be obtained. By reservation of smaller lakes at various points of the Province the Department might declare or establish a number of sanctuaries. The selection of these sanctuaries would depend upon the species of game-fish concerned, it being assumed that the species are natural to the water selected. It would be advisable, for example, in relation to bass, that many smaller lakes in various parts of the Province should be set aside when situated in the vicinity of larger tourist waters which they may be made to serve by transfer of fish from one to the other or for transfer to other local waters that can temporarily be closed. Some six sanctuaries of this nature have already been established by the Department of Game and Fisheries in Ontario. In bass waters such as those of the Georgian Bay, where intensive fishing has probably reduced the number of parent fish to much less than needed, the addition of adults followed by temporary closure of sections of the water would be advantageous.

Obviously, the chief difficulty in the way of establishing sanctuaries is the fact that care-taking supervision of some kind must be maintained. It is probable that in most regions in Ontario the question of land value, or necessary improvement for purposes of making the sanctuary effective would not be an important issue. On the other hand, in southern Ontario, both land value, and in the case of speckled trout reserves, also construction and maintenance would be important items.

As regards supervising service, it has been represented to the Committee that such service could be provided in many cases free of all expense to the Government, through associations, municipalities, individuals or clubs already employing service, if there were any assurance that the creation of the reserves could be authorized by Government action. The conditions commonly complained of by persons who have already devoted thought and effort to the matter are, first, that having no right to reservation or prevention of fishing in public water neither individuals nor local bodies can maintain protection because of other individuals taking advantage of the situation; second, that there has not been sufficient public and Governmental interest shown in the matter to make it a live issue; and third, that supplies of fish for stocking have not been available.

Assuming that the primary responsibility of maintaining the sanctuaries would fall upon the public service, and that in many cases individuals or associations might readily agree to maintain supervision and afterwards be unable or unwilling to continue to do so, it would be well in those cases demanding outlay on the part of the Government for construction or other purposes, to specify the minimum time that the water is to be closed or supervision locally provided.

As indicated elsewhere in this report in the discussion of arrangements for closure, it is not possible to draw a sharp line of distinction between what would be regarded as a sanctuary and what would be regarded as a water closed for some years to encourage growth or provide stock.

It would be possible on various Government owned properties to maintain fish ponds or trout runs with little expense. Reforestation areas would, in many cases, be well adapted for the purpose.

It may be taken for granted that, in forest reserve areas where there is game-fishing subject to the ordinary restrictions of minimum size and numbers, the fishing is going to deteriorate rapidly unless some closure and possibly re-stocking is carried out. In most cases the important consideration would be local closure, and an ideal method to follow would be to open lakes or streams in groups so that there would always be some closed and others open.

Farmers and other land owners, who control land rights on the course of and more especially about the headwaters of trout streams could be encouraged to provide protection for the fish on some such basis as permanent closure of the upper reaches and public fishing in the lower.

Finally, in addition to local fish and game associations, municipalities should be encouraged to designate areas for sanctuaries, which would then be set aside by Government action. Except in the case of larger municipalities, where the game and fish for the most part have already gone by the board, there has been no great recognition of the part municipalities might play in conservation. More especially perhaps in county organizations and, northwards, in district organizations, the assumption by them of conservational arrangements and responsibilities would go a long way towards establishing public opinion in favor of sanctuaries and related matters, if for no other reason than that the advantages of conservation in relation to local trade would be under discussion in local councils.

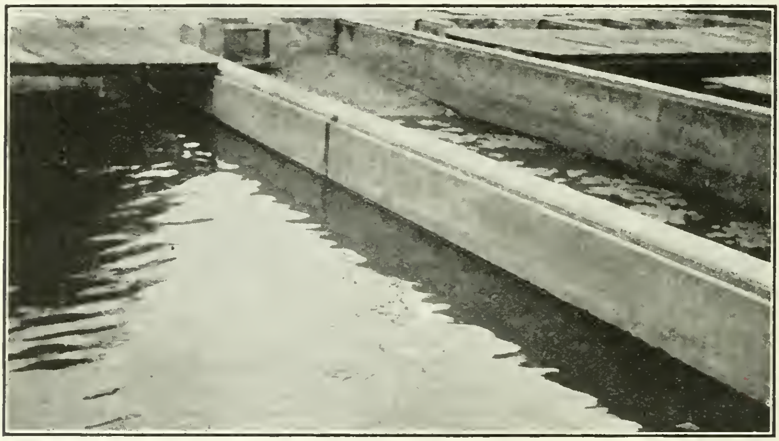
11.—Aquiculture and Agriculture

In the course of the present investigation, it has been suggested by some that there should be a closer relation between the game and fisheries service and the Department of Agriculture. The basis of this suggestion is the natural alliance presumed to exist as regards the outlook of both branches, in other words the interests in common of agriculture and aquiculture.

The practices connected with the growing of land animals, especially of domesticated animals, with greater or less control of the various factors concerned, has an obvious parallel in the production of fish under similar conditions.

Aquiculture, however, appears to represent mainly a principle, namely, that water areas should be handled for maximum production of fish or other aquatics in the same way that land areas are used for maximum production of domesticated animals and field crops. In this sense all fish cultural work is broadly aquicultural in nature. The difference is that agriculture has gone through all the stages from dirt farming to applied science and fish culture has not. The alliance or association suggested as between the two fields may therefore be, either as above indicated that the same developmental plan in its practical, educational and scientific aspects should be applied to both, or on the other hand that a particular advantage may be sought in encouraging fish culture as an accessory method of production among farmers and others capable or conveniently situated for handling it. So far as the Government service is concerned, while it is true that in various parts of the world agriculture and game protection or propagation are frequently to be found under common administration, it is probable that the essential and historical importance of agriculture and the incidental or secondary requirement of game service as relating in some way to animal life, rather than essential community of interest, was the basis of older organization, and that in any case there are no particular conditions in Ontario indicating or favoring that association in an administrative sense.

It will be recognized that one of the essential elements in the matter of encouraging aquiculture, or working along aquicultural lines for production or conservational purposes is the same element that appears in agriculture, namely, personal ownership or private enterprise. The expectation that aquiculture maintained on the present public basis should have the same development as agriculture leaves out of account the basic fact that agriculture has been successful in obtaining increased production because its products and improvements have always had private value. Game and fish production may be and commonly are, successful on the same basis.



Cement construction of ponds at the Pennsylvania State Hatchery, Pleasant Mount, Pa.

This, however, leads to another question, and a very difficult one, especially in Ontario, which apparently many sportsmen, farmers and orhers have considered, namely, the extent to which aquiculture can prosper under conditions of open public fishing, or the part that might be played in general conservation by encouraging private owners more especially in the southern part of the Province to engage in fish culture.

12.—PRIVATE FISH CULTURE

Private fish culture has in it certain elements of public advantage. It provides food or sport to people who otherwise would have to utilize public waters. It satisfies a certain element of people, who live in industrial centres where local fishing is otherwise inaccessible and who cannot take time for vacations. It increases the number of establishments in which fish growing is going on and makes possible exchange or transfer of stock. It invites the attention of sportsmen who become interested in growing fish rather than in simply catching them, and creates a constructive sentiment in favor of general attention to public waters. It encourages the ordinary land owner to do something for himself in adding to the fish supply.

The outstanding difficulties which lie in the way of private fish culture at the present time in Ontario are, first, that all wild and semi-wild animals, including fish, are public property, and second, that in general, land rights do not include water rights. There are all degrees of difference between ponds and creeks lying upon privately owned lands, of which it might be said that while no private ownership exists, exclusive use would not be questioned, and lakes or rivers, which are not only navigable in the usual sense, but in respect of which the owner of an abutting property has no especial rights.

The traditional practice and policy of the Province of Ontario is in the direction of keeping all fishing areas open to the public as against the practice of leasing or of otherwise disposing of special or exclusive rights to private individuals. The Committee assumes that this policy will be maintained.

The question is, therefore, whether, in view of the advantages stated above, there is any possibility of improving the game-fish situation along lines more or less involving private control.

Farmers, for example, could, with little effort, be encouraged to engage in fish rearing and could be instructed in the method of making ponds, or improving ponds or creeks. Such waters would prove useful for providing food, valuable alike for variety and convenience. In the case of waters large enough to attract public attention or streams running through several properties, farmers could not reasonably be expected to be interested if subjected to continuous annoyance from individuals invading, trespassing on or damaging their property. On the other hand, groups owning the land along streams might readily agree to protect the headwaters or upper reaches, provided fishing were permitted only in the lower portion. The same would be possible of lakes not accessible by public roads, provided public fishing were restricted perhaps to a certain number of days.

Private angling clubs and associations could be awarded leases or holdings on stream runs, provided that they engaged in fish culture, and under other conditions hereinafter mentioned.

Speckled trout fishing in the southern part of the Province is, generally speaking, only of local advantage, no tourist element being concerned. Accessibility in respect of good fishing water is of prime importance, and for this reason as well as on account of the public policy of the Province, no more than a moderate number of private establishments could be admitted. In view of the fact that privileges would be awarded on stream sections, which would otherwise be open to the public, and that such places might otherwise be used for public fish cultural operations, it is possible that the award of rights might advantageously be coupled with the condition that ponds should be constructed, reserved and supervised for the purpose of assisting in the re-stocking of public waters, or more especially re-stocking the lower reaches of the same stream system which would be open to public fishing.

It will be observed that the whole question of private control and such public advantage as may be expected of it, is made especially difficult because of the lack of definition of water rights. At the present time the protection afforded to anyone trying to maintain fish in water on privately owned land is apparently confined to arrest for trespass. Trespass, being a very minor offence, is likely to be largely minimized both by the culprit himself and by the Court. It would seem to be a comparatively simple matter to provide legislation that would ensure that those exclusively engaged in growing the fish should have the exclusive privilege of taking them in all waters of insignificant size and surrounded by privately controlled land. and not in general subject to claim for public use or convenience.

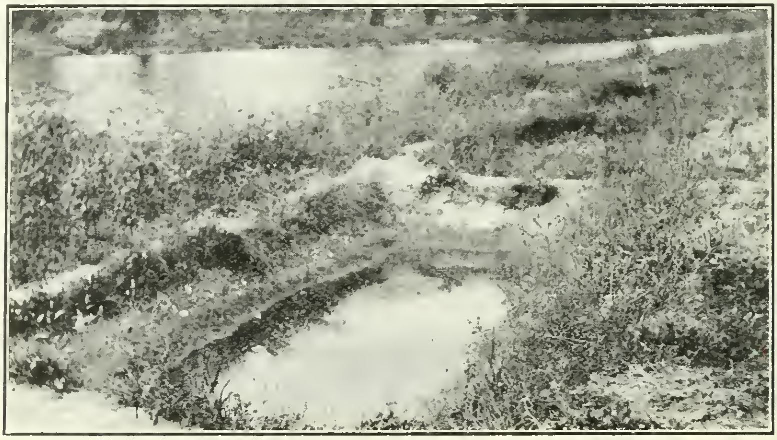
GENERAL CONSERVATION

Under this heading are considered the control of various conditions leading to depletion and the type of educational policy which should be adopted in order to bring about improvement along educational lines.

1.—Spearing and Netting

Protests against the use or misuse under certain conditions of spears and of nets, and more especially with reference to the leniency observed as to the possession of such apparatus in view of the ease with which it can be illegally applied, have been a common and fairly general feature of this investigation.

Spearing is resorted to in the spring and fall when spawning fish are in the shallow water. Even if the fish are commercial fish such as lake trout and pickerel in Great Lake waters where there is no close season, spearing is objectionable because of the destruction of parent fish. Spearing of lake trout and pickerel in Great Lake waters so completely Canadian as Georgian Bay and most of the North channel is especially objectionable because of the game-fish importance of these waters as regards one or both of these species, and especially in view of the unfortunate lack of international regulations protecting these fish in the Great Lakes. Spearing under permit has been strenuously objected to in connection with ice fishing in Hamilton Bay by the Hamilton Anglers' Association because of the alleged destructiveness to the pike and other fish worthy of protection. Illegal spearing in inland game waters during spawning time or in winter through the ice has been generally complained of as a method used by poachers, extremely difficult of detection, and very destructive to game-fish.



Daphnia Pond at New Jersey State Hatchery,
Hackettstown, N.J.

The Ontario Federation of Anglers and some other independent associations have put themselves on record as opposed both to the use of spears and to their possession at any time. The Committee is of the opinion that their contention is in the main correct. The only exception of which the Committee is aware is the possibility that injustice may be done to settlers in respect of spearing in bays off the Great Lakes, and in respect of spearing suckers during the spring run. The advantage served by such privilege, however, appears to be slight in comparison with the potential damage made possible through the possession of spears, while the advantage is obvious of having a regulation that cannot be misinterpreted. The Committee therefore recommends that, if necessary after due notice has been served, the taking of fish of any kind by spear be prohibited in the Province, further that the sale or possession of such implements be prohibited, and that the ownership of them be regarded as *prima facie* evidence that they are being used illegally.

Apart from the legal use of nets as implied in the landing nets used by anglers, the minnow dip nets used for taking bait minnows, and various types of nets used legally under permit or license for commercial purposes, there is apparently going on in the Province a good deal of operation of gill nets in short lengths, used for taking fish of any kind, especially in inland game-fish waters.

The destructiveness of such nets is obviously very great. They may be used to capture bass and other fish which have been impounded in shallow bays or are moving in shallow runways. They may be used by hunting parties unwilling or unable to obtain fish by angling. They may be used for the capture of fish on spawning beds in spring or fall, whether or not the fish themselves may be legally captured. As in the case of spears the existence of such gear is likely to increase greatly the destruction of game-fish. The Ontaro Federation of Anglers and other bodies have asked that gill nets used under conditions as described above should be prohibited. Unless, as seems unlikely, the Department can control them when restricted to use by settlers under special permit, their general prohibition should be brought about. So far as the Committee is aware, no useful purpose can be served by permitting legally or by failure to bring under regulation their use. It is, therefore, recommended that the sale or use of gill nets of any kind, except those used and licensed for commercial waters by commercial fishermen, or those used by the Department for its own service, or for scientific and educational purposes under permit from the Department, should be prohibited and that the possession of such nets should be *prima facie* evidence that they are being used illegally.

In this connection, it has been represented to the Committee that the Department of Game and Fisheries should have on record every piece of gill net that is being operated during any current year in the Province, and that dealers and manufacturers should be required to report their sales. The fact, however, that the importation of such gear into the Province is permissible would prevent such a regulation from having the force and applicability intended.

2.—Dynamiting Fish

Among the representations made to the Committee concerning illegal taking of fish, there is the complaint of killing and injuring fish in large numbers by the explosion of dynamite. It is an old offence and one that is difficult to overcome or detect unless an overseer happens to be in the immediate vicinity. Dynamite is commonly used in construction work, and on that account becomes widely distributed in northern camps. It is, in all probability, for the most part individuals engaged in one way or another with construction work or timber operations who are immediately concerned, and the fact that operation may take place in the vicinity of little fished or almost virgin lakes, and that the fish in these lakes come in shore at certain times of the year, doubtless give rise to the idea of obtaining fish by the dynamite route.

It is unfortunate that in the regulations applying to fish the prohibition of taking fish by any other method except commercial license or angling, should be the only, or even the principal way of stating the requirement. In all probability, there should be included, both in the Ontario Act and in the Dominion regulations as reported in the Department booklet, a definite prohibition and penalty prescribed against the use of dynamite. It is possible also that the use, sale or handling of this material could be regulated so that there would be less chance of illegal operation.

3.—Night Fishing

So far as the Committee is aware, angling at night is not prohibited except to the extent implied by the Dominion regulation, prohibiting the use of artificial lights or taking fish by any means except angling. It would doubtless be in the general interest to have defined in the regulations the prohibition of angling at night. This would have the advantage of enabling overseers to exercise more direct supervision, because of the ordinary restriction of angling to the hours of daylight, and further of confirming illegal operation in case night fishing is being carried on.

The setting of night lines and other methods of taking fish not authorized as "angling" should be prohibited by a special regulation rather than by the negative implication that they do not constitute angling as defined in the regulations.

4.—Removal of Coarse Fish

Representations made to the Committee frequently refer to the advisability of removing coarse, rough or trash fish from the waters. The grounds upon which removal is urged are (1) destructiveness to game-fish, (2) destructiveness to game-fish spawn, (3) competition with game-fish for available food, and (4) predominance in game-fish waters where they remain in large numbers while more worthy fishes are removed.

Information bearing on this matter is in a very unsatisfactory condition. There is no common understanding as to what constitutes a coarse fish. The popular evidence of their destructiveness is generally unreliable. There is little accurate knowledge available from technical studies, and there is at least some commercial interest in finding or possibly inventing reasons for their capture.

The species, some of which might be included in the category of "coarse," "rough," or "trash" fish, should, if any action is to be taken concerning them, be scientifically defined. They would perhaps be pike, perch, rock bass, sunfish, bull-heads of different species, dog-fish, gar-pike, ling, and different species of suckers, excluding a considerable number of smaller shallow-water species commonly designated as "minnows." In the general understanding, the fish that are pre-eminently coarse fish are the suckers, especially the common sucker, *Catostomus commersonnii.*

The common sucker inhabits both shallow and deep water. It is not commonly taken on the angler's tackle, but is a common element of the commercial fish catch in almost any kind or depth of water. During the early spring it ascends streams following the pickerel which ascends for the same reason, namely, to spawn in the upper reaches. The sucker, being a ground feeder, is presumed to feed upon the pickerel eggs. In a similar way, the sucker appears a little later in the shore swamps and over the bass nests and is set down as a consumer of the bass spawn. Also in the fall, the sucker is found on the shoals where lake trout are spawning. There is thus a very close relation between the spawning of valuable fish and the presence of the sucker.

As a presumed destroyer of spawn, the sucker is in general disrepute. On the basis of ordinary habits and associations circumstantial evidence is entirely against it, but unfortunately for clear understanding of how the coarse fish question should be handled, the claim that the sucker actually destroys spawn has, so far as the Committee is aware, not been substantiated.

On the other hand, the two to four-inch young of the common sucker make up a fair proportion of the "minnow" population of inshore swamps. These young suckers are eagerly taken by bass and pickerel and it may be presumed that they have significant values as food for game-fishes. Further, in defence of the sucker, the opinion of Mr. W. H. Martin, Game and Fishery Overseer at Kenora, may be quoted. The spawn of the pickerel has a tendency to adhere in dense masses with resultant suffocation of unexposed eggs. In Mr. Martin's opinion, the presence of the sucker during the spawning of the pickerel may have the good effect of breaking up these masses and thus ensuring oxygenation of larger numbers of eggs.

It may be remarked that in consequence of many requests made by the Committee for information on the action of the sucker in destroying spawn there may be in the near future more accurate observations reported upon the actual finding of the eggs of pickerel, bass or lake trout in the sucker's stomach.

At the present time the question of what should be done with the sucker appears to be reduced to the rather uncertain ground that removal may be indicated or justified because of excessive numbers.

As regards the taking of the sucker, with adequate protection to other fish of a better sort, opinion is divided as to whether such removal should take place under license or under Departmental supervision. In view of the likelihood that game-fish are spawning, the Committee is of the opinion that the work should be done under Government supervision.

In this connection it may be pointed out that in the State of Michigan, in which many conditions exist analogous to those in our Province, the law provides not only for times of close season for suckers in the Great Lakes, and times of capture in the early spring in inland waters, but also for removal of these and other rough fish, the removal being effected by permit after petition from local residents, the work being done under supervision of the State which also receives a percentage of the proceeds of sale.

The pike may be eliminated from the list, especially as it is beginning to be recognized as a game-fish.

Bull-heads of the ordinary small varieties are commonly complained of as spawn eaters, but again on very uncertain grounds. As regards their position otherwise, they have some value both from a food and angling standpoint. The young are common inhabitants of inshore swamps but because of their formidable spines probably do not serve to any great extent as food for other fishes.

Dogfish and garpike are both destructive to other fishes, and their young probably have no food value. Their removal would entail operation of nets in the inshore bays which, if carried on during the early part of the summer, might easily result in damage to the nests of bass.

Rock bass, sunfish, and especially perch, are suspected of piratical tendencies in relation to the young of bass in inshore swamps or bays. While sunfish are mainly insect feeders, it is possible that rock bass and perch do some harm to the young bass. It is of some importance, however, to realize that these fishes, while unwanted where there are better ones, are somewhat of the rank of game-fishes. In view of the fact that in many of the States they are protected and artificially propagated, too much haste in getting rid of them in Ontario waters would not appear to be justified.

In general, the proposal to remove the coarse fish does not appear to the Committee to be as yet sufficiently well-founded to justify immediate or extensive action in that direction. It would seem on the whole better that the Department should continue to collect the necessary evidence bearing upon the point in a dependable scientific way and to later frame a method of procedure on that basis. An exception should be made for the removal of pike from trout waters, and of ling and carp from any waters. All operations for removal should be conducted solely under Governmental supervision.

In connection with this matter, the Committee has received certain requests for permission to take coarse fish commercially in inland waters. These requests will be referred to the Department. Some comment on the coarse fish question will also be found elsewhere in this report in the discussion of inshore commercial fishing privileges.

5.—Minnows

The situation as regards the taking and use of minnows has an important bearing upon the game-fish situation. This bearing is not commonly recognized and in many ways the significance of the minnow population is likely to be misinterpreted.

Minnows are more exactly soft-finned fishes of the general carp or goldfish type which may, under exceptional conditions, grow to a considerable size and weight, but as usually found are from about an inch to some four inches in length when adult. They are common inhabitants of shallow runways and swampy bays. Such waters, however, contain a variety of other fishes of small size, both adult and young, including log-perches, darters, miller's thumbs and sticklebacks, all of which are small species, as well as the young of suckers, small and large-mouthed bass, pike, maskinonge, pickerel, perch, rock bass, sunfish, catfish and other species.

To the extent that any of these small fish, adult or young, are acceptable to larger carnivorous fish as food, they are generally made use of in that way, though there are definite lines or zones beyond which bass, pickerel, pike or maskinonge will not advance in their pursuit. These small fishes, however, and more especially the soft-finned true minnows and young suckers, while of no value for any other purpose, are tremendously important as good for game-fishes and, incidentally, as angling bait.

It is important to bring under control the taking of these "minnows," first because of the possible destruction of the young of game-fishes, second because of the possible tearing up of the vegetation from the bottoms of inshore bays, and third because of the reduction in numbers and possible wastage of fishes important even if not absolutely necessary as game-fish food, as well as the possible introduction of undesirable species into new areas.

There is, at the present time, what appears to be a discrepancy between the Dominion and the Ontario regulations respecting the conditions under which bait minnows may be taken.

In the Dominion regulation permission is granted to make use of a dip-net of a maximum diameter of twenty-seven inches for the purpose of taking minnows. Most minnows being wary, especially in clear water, a dip net of this diameter is practically valueless.

Ontario regulations permit of a dip net being licensed for the capture of coarse fish minnows, the measurement of the net not to exceed six feet by six feet, it being presumed that such a net can be used legally. This type and size of net represents in all probability the most harmless device which could be used, because it would not take excessive numbers of minnows and young game-fish and would not cause damage to the inshore vegetation.

Ontario regulations also permit of a license being issued for the use of a minnow seine not to exceed thirty feet in length or six feet in depth. This type of net is very destructive.

In view of this situation, the Committee recommends, first, that flat dipnets measuring not more than six feet by six feet should be permitted to be used, free or under nominal license, for the capture of bait minnows; second, that minnow seines should either be prohibited or limited, under license, to a length of ten feet and a depth of two feet, except when used by officers of the Department for propagatory or stocking work, or under permit of the Department for scientific or educational purposes.

Semi-natural bass ponds at Riley's Fish Farm,
Barberton, Ohio

Sale and transfer. Planting with minnows could in all probability be done advantageously in order to overcome food deficiencies of certain waters. It should only be done under expert supervision after study of the local conditions.

Indiscriminate transfer of minnows is undesirable, first, because persons transferring them for game-fish food purposes may not know the specific differences between them, and therefore will not know the consequences of their introduction; second, because minnows may be taken from one region to another by sportsmen for bait purposes and allowed to escape in waters in which they may be injurious.

The sale of any live minnows other than those taken locally for fishing in the same general area is inadvisable because of the danger of introducing in the young stage, fish like carp which are not wanted.

Because of the conditions outlined, the general sale, except of minnows taken and used locally, should be prohibited. Local capture and sale, which represents both a source of revenue to children and others, and a convenience to sportsmen, is probably harmless if the minnows are not taken by destructive apparatus. Transfer of minnows for food stocking purposes should be encouraged but only under Government supervision, a general regulation against transfer being first advisable.

6.—Changes in Canal Water Levels in Relation to Game-fish Conservation

Two important canal systems, the Trent and Rideau, include in their course and head water supply some of the outstanding game-fish waters of the Province. The operation of the canals for navigation and power purposes is attended by natural and artificial raising and lowering of levels which in various ways affect the welfare of the fish. There are doubtless conditions and changes favourable to the fish, but comment and complaint are common as to fall lowering, leaving spawn of lake trout exposed and spring lowering leaving the spawn of maskinonge or other fish exposed. Several representations have been made to the Committee, especially with reference to the headwater lakes and the Kawartha Lakes of the Trent system and with reference to Newboro and Charleston lakes in the Rideau system.

It does not seem possible at the present time to obtain much definite information as to presumed injury to the game-fish nor to the alleged lack of attention on the part of Provincial or Dominion authorities to the question.

With reference to the Trent system, the Committee had a special conference at Peterborough with Mr. A. L. Killaly, Superintending Engineer. Mr. Killaly afterwards kindly attended the public meeting at Toronto, where he personally explained the necessity of certain conditions of water-level which had been represented as injurious to game-fish. Mr Killaly readily placed at the disposal of the Committee all the engineering and hydraulic data bearing on the question of the changes in level, and assured the Committee that while the requirements of navigation and power supply have to be maintained, he was ready at any time to consider and investigate cases of presumed injury; further that the Dominion service which he represents is ready to co-operate in preserving the game-fish supply so far as practicable.

As regards the Rideau system, Mr. A. T. Phillips, Superintending Engineer, expressed himself in a similar vein.

It appears to the Committee that the management of these systems, and more especially the Trent system which in its entirety affects a relatively enormous water area, is a highly technical operation, which requires constant observation and recording. For this reason, there are likely to be from time to time changes in level which are not readily intelligible from the lay point of view and which either actually affect fish life or are naturally suspected of doing so. Under these conditions, the expressed intention of the Superintendents of doing what they can for the protection of fish life is relatively more important than the attempt to determine whether one interest or the other is of the greater significance.

The Committee is of the opinion that conditions might be improved in the following ways:—

(1) The Provincial Department should make its own investigation of the effects upon fish life of the lowering and raising of water-levels.

(2) The Provincial Department should keep in touch both with individuals and associations along the route of these systems, and, on the receipt of complaints, report them to the respective Superintending Engineers.

(3) The Superintending Engineers might be requested to communicate information regarding special work or changes proposed, as opposed to routine canal business, which might affect the welfare of the game-fish in a particular area.

(4) Where the game-fish situation might be permanently or temporarily improved, the Province might in the general interest undertake necessary service or construction, it being presumed that this service or construction is entirely because of the game-fish interest and is not disadvantageous to the canal system.

(5) In consideration of the advantages that have been brought to the respective communities by the creation and expansion of these beautiful water areas of the Trent and Rideau systems, the local residents and anglers could well afford to look with greater leniency upon the disadvantages which result from navigation and power requirements.

(6) The loss of fish, especially of bass in the Rideau and of maskinonge or lake trout in the Trent, if shown, after examination by the Department, to be serious from the point of view of game-fish requirement and the tourist trade, could be to a certain extent counteracted by more intensive propagatory operations with especial reference to the requirements of the two systems.

7.—Timber Dams in Relation to Present and Past Conditions of Water Level

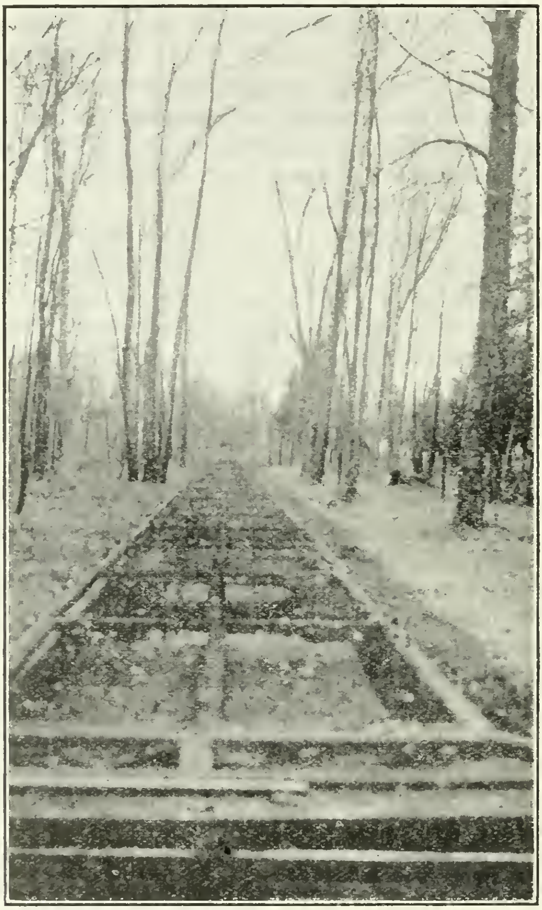
The utilization of streams for the flotation of logs has resulted in many kinds of construction of the nature of dams and chutes over falls, narrows and rapids. Since the companies operating did not as a rule have any permanent interest in these structures, they have been left to stand or fall as time and circumstance might decide and are now, generally speaking, in all stages of disrepair. Some of them, not now operated, are holding up levels in upper waters, while others have been reduced to timber debris clogging the stream beds.

Several such instances have been reported to the Committee, and it is evident that in certain cases at least some kind of action should be taken, either to repair the dams or to remove obstructions to stream flow or fish migration. Since it will be true of many places throughout the northern or pre-Cambrian region that increased water area is relatively more valuable than land, more especially if the latter consists of ugly, drowned out or denuded shore line, the plan of action most likely to be advantageous would be to endeavour to retain the higher levels in upper waters, rather than, by destruction of disused dams. to allow the upper waters to come back to their original levels. It is often the case also that the only transportation routes are water routes and the maintenance of higher levels is thus a matter of some importance to settlers and others in moving supplies.

8.—Fishways

There has been already throughout the Province considerable development of power dams, and similar though perhaps less complete or costly mill dams, which development has taken place without reference to the possible requirements of fish migration. There has been, in general, a notable disregard of the Dominion law requiring the construction of fish passes in such a situation. In fact in the construction of power dams, the possible effect upon the game-fish has apparently not been thought important enough to bother about.

As regards the necessity of fishways or their advantages from a conservational standpoint, there is a general sentiment among sportsmen that in all streams or rivers where fish normally run up or down stream, fishways should be provided. There is, in fact, a sort of tradition as to the necessity of fishways, irrespective of their probable local utility, based of course primarily upon the stream ascending habits and requirements of trout and salmon.

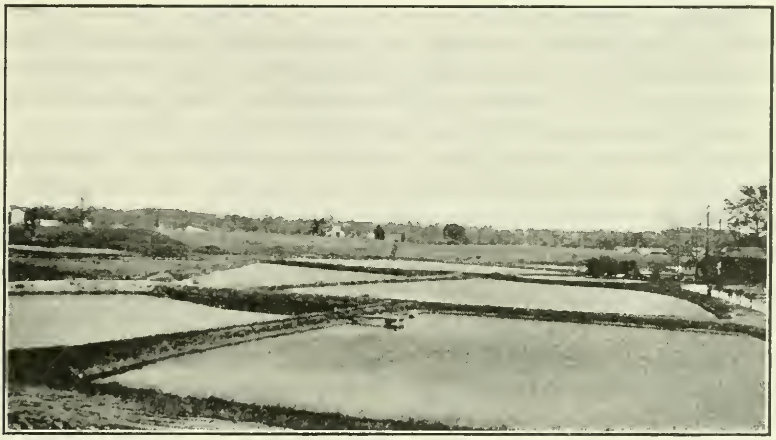


A form of artificial construction for trout runs not so effective as cement construction but satisfactory and much less costly. Michigan State Hatchery, Paris, Mich.

So far as can be ascertained, the value of fishways depend upon the extent of instinctive insistence which fishes show in ascending or attempting to ascend streams during their spawning migration. The stream ascending instinct is very marked in salmon and in brook trout, moderately indicated in pickerel and to a certain extent in maskinonge, and is practically non-existent in bass. It is probable, therefore, that in all parts of the Province where bass, pickerel, and maskinonge predominate the construction of fishways would serve no particular use except permitting greater freedom of movement. In trout waters, on the other hand, the absence of effective passes might easily result in a rapid falling off and eventual depletion of headwater areas.

The only cases brought to the notice of the Committee as regards trout are, in the first place the Nipigon River, generally considered to be the best and most famous trout river in the world, the upper and middle portions of which have been greatly modified and, in the opinion of many, ruined by power dam development, and, second, the Mettagami River in Northern Ontario, on which the construction of power dams has seriously interfered with the free migration of trout.

There appears to be no good reason why the Province, which in one way or another would be able to control such a situation, should accept without protest the action of interests concerned in power or similar developments involving the construction of dams, knowing that these interests are not likely to be particularly concerned with the welfare of game-fish, but knowing also that the Government service is being relied upon to see that all public interests are safeguarded. This being the case, it may be reasonably suggested that there should be some definite policy pursued with reference to the free passage of trout into upper stream waters, that complaints as to the damage done by such hindrances to migration should be thoroughly investigated and if possible corrected, and finally that more attention should be given in future to the practicability of fishways in trout waters under consideration for the construction of power sites.



Bass rearing ponds at the Michigan State Hatchery,
Hastings, Mich.

The Dominion regulation regarding the requirement of fishways should be given advertisement in the publications of the Provincial Department. The same is true of the Dominion regulation prohibiting various kinds of hindrances to fish migration.

9.—POLLUTION

Pollution is also a matter upon which a more vigorous policy is greatly needed. It is specifically prohibited by Dominion Fishery regulation, and by Provincial Health regulation, but is nevertheless so common in occurrence that we may judge the matter, from the point of view of fish conservation and in many ways from the point of view of health and convenience, to have been largely ignored.

Some of the ways in which pollution is indicated in this Province are in the direct discharge into water channels of sewage or industrial waste, the latter from a wide variety of plants and including dissolved chemicals and solid materials. The chief damage being done in Provincial game-fish waters is from paper mill waste, wood, paper and chemical slops, pulpwood bark, sawdust and chips from lumber concerns, and the waste of mines. dye works and gas plants.

In a recent address by Mr. Justice Kelly, dealing incidentally with some phases of this question, reference was made to the problem arising from paper mill waste at Dalhousie and Athol, where scientific investigation resulted in the construction of a pond or settling basin by which the chemical waste from the plant was successfully treated so as to be largely harmless to fish life.

A great deal of investigation has been carried out in various parts of the world regarding the effects of pollution whether from the point of view of human health or of fish life and the means by which the various types of pollution can be remedied. In Ontario, viewing the matter from a game-fish standpoint, thorough investigation of the question would seem to be first advisable. Such investigation should be followed by the adoption of an aggressive policy in the direction of doing away with water pollution and its effects.

In view of the fact that pollution is already prohibited by Dominion Fishery Regulation, which should receive public advertisement, the only other question which arises is as regards the proper application of the regulation and enforcement with such adjustment as may be necessary for the Great Lakes and inland waters.

10.—Injurious Birds

It is commonly represented by sportsmen that certain birds are very injurious to fish, especially to shore or shallow water fish, and that some movement in the direction of destroying these birds would be in the general interest. The species of birds most commonly complained about are the American Merganser, Sheldrake or Saw Bill, the Great Blue Heron, and the Common Kingfisher.

The American Merganser has a very wide northern summer distribution. It raises large broods, and, being a fish-eating duck, is destructive of large numbers of small species of fish and the young of larger species. It enjoys considerable freedom from being shot at, both because it has the same close season protection as other ducks, and also because it is generally not wanted as food.

The Great Blue Heron is a large shore wader which hunts persistently in inshore bays, searching for frogs and fish which constitute its natural food. It is also a regular attendant upon trout ponds where it is capable of inflicting great damage.

The Kingfisher is a comparatively small species which feeds consistently upon fish about the shores of lakes and streams and is also common in the vicinity of trout ponds and does a great deal of injury to the younger fish.

Both the American Merganser and the Great Blue Heron are at the present time protected by international treaty through the Migratory Birds Convention Act and Federal Regulations, so that the reduction in numbers of these birds would be difficult to bring about. A partial exception may be made of the Merganser which is subject to open season in the same way as other ducks, but the fact that it is migratory and has a large summer and winter range in Canada and in the United States would make any local or Provincial arrangement for reducing its numbers of little effect, unless by concerted action of sportsmen throughout the continent. Provision is, however, made in the Migratory Birds Convention Act by which it is possible for officers of the Government to destroy these birds locally if considered injurious.

The Kingfisher is apparently not protected under the Migratory Birds Convention Act but comes under the general protective clause of the Ontario Game and Fisheries Act covering wild native birds.

It may be remarked that although many birds may be shown to be injurious directly or indirectly to fish life, it is necessary to adopt a reasonable attitude towards their preservation or destruction. In the conservation of wild life many interests are concerned, some of which would doubtless attach greater importance to the preservation of bird life than to the preservation of fishes.

11.—Refinements of Angling

While the nature and process of angling as permitted under the regulations is comparatively well defined, several suggestions have been made as to further restrictions which could, with advantage, be imposed.

At the present time, the practice of trolling, which consists in drawing line and lure from a boat in motion, and which was formerly practised almost entirely from hand propelled boats, is now being carried on to a considerable extent from motor boats. Fishing under these conditions is not tiring and may be maintained continuously over a long period. The generally greater speed of the boat and the inelasticity, both of the boat and line, results in fish being heavily struck and damaged whether subsequently caught and liberated or not. The fact that the boat is able to go almost anywhere, and that within recent years the use of shallow draught outboard motor boats has become very common, means that any area where fish normally congregate can be raked over time and time again. It is not improbable also that the persistent vibrations caused by the exhaust and operation of the engine, especially over shoal areas, has some effect in driving fish from their normal feeding places.

For these reasons, there is now in the Province considerable protest against the use of such boats and a corresponding desire for a prohibitory regulation which will prevent angling from all moving vessels which are not hand propelled. Such a regulation would, in all probability, be in the best interest of game-fishing.

The Committee accordingly recommend that angling or trolling from boats of any type while under sail or mechanical power should be prohibited.

Again, there has been, within recent years, a very great increase in the number and variety of the so-called "plug" types of lures, distinguished both by their weight and resistance to the strike of the fish and occasionally by the formidable character of their hooks. It is probable that the deadliness of these lures is not as great as is suggested by their forms, colours and advertised effectiveness, all of these being in some respects an appeal to the sportsman's imagination. At the same time some vigilance ought to be exercised to see that they conform to the regulations, and the size of the hooks, either as singles or triplet gangs, might with advantage be specified.

There is no doubt that the more general use of the plug and similar types of lure is being viewed with alarm by a great many sportsmen, some of whom think that such artificial baits should be prohibited; others suggest that triplet hooks should be banned and single hooks only used. It has also been suggested that of the hooks now commonly affixed, only the fore or the aft members should be allowed. This would, however, make the lure to a certain extent ineffective for fishing in general bass, pickerel, pike and maskinonge waters, since some fish take the lure only from a front or lateral position, thus engaging one of the front hooks or gangs while others strike from a follow up position, engaging only the rear ones.

Prohibition of the use of plug baits would undoubtedly result in a great deal of dissatisfaction, but it is not improbable that raising the question will have the effect of bringing about more consideration of the issue as to whether, in the general interest of conservation, this type of lure should be discarded.

Deep water trolling with copper lines for speckled trout in trout lakes has been brought to the notice of the Committee as a practice likely to result in rapid depletion. It is pointed out that in the early part of the season the trout may be fished for in shallow water and that this amount or extent of fishing is all that a lake should be expected to sustain. Under present conditions, however, when in the later part of the season the fish retire to deep water, the use of the copper line again brings them within reach of the fishermen. The result is that the fish are taken during a very long period of the year. The Committee is unaware of the general occurrence of this condition, which was reported by the association of Sault Ste. Marie, but it appears to be one that should be controlled either by prohibiting the use of deep trolls in waters inhabited by trout other than lake trout, or by cutting off the summer portion of the season in which fishing is carried on in this manner in such lakes.

The question of what kind of tackle ought to be permitted for angling will no doubt always be a matter of discussion. Probably a considerable number of sportsmen fishing in the Province would prefer the use exclusively of barbless hooks, but the prohibition of barbed hooks would nevertheless result in general dissatisfaction. In this case, as in many others of a similar nature, opinion as to the general worthiness of a regulation will depend very much upon the ideals of the individual sportsman and as to whether he gets more enjoyment out of catching fish or testing his own skill by self-imposed rules of the game.

12.—Public Understanding of the Game-fish Regulations

One of the essentials of good law enforcement for purposes of protection of the game-fish supply is that the regulations should be so defined and publicly distributed in printed form that in the first place they convey exactly what is intended, and, second, that they should be stated in simple language so that the average citizen or non-resident tourist can easily understand them.

There have been so many comments on the game-fish regulations applicable to Ontario and on the general question of how tourists and others view the situation that the Committee has considered it advisable to ascertain if possible and point out where any obscurity as regards the regulations lies. This is not a very simple matter for the reason that regulations have a certain original foundation, have had to be altered to fit one contingency or another, and in the long run are likely to be more than ordinarily abstruse.

The statement of all the regulations applicable to game-fish in Ontario is difficult because of the differences between (1) Dominion and Provincial authority, (2) requirements as regards Great Lakes and inland waters, (3) game and game-fish interests, and (4) game-fish and commercial fish interests.

Some of the doubtful or confusing elements may be outlined as follows: The regulations applicable to Ontario are partly of Dominion and partly of Provincial origin. The primary fisheries authority was by the provisions of the British North America Act vested in the Dominion, and certain functions were afterwards taken over by the Province by decision of the Privy Council. In the natural enlargement of the duties and obligations of the Province it became necessary for the latter to assume protective and other services and to accept the responsibility of the enforcement of regulations of whatever origin.

While it might be said that the differences between Dominion and Provincial regulations is of no consequence to the non-resident tourist, in some respects a debatable point, there is no doubt that a clear understanding of the situation would be useful to our citizens, and in particular to sportsmen who are thinking about the propriety of the regulations in relation to protection against over-fishing, depletion and similar matters.

The Blue Book of the Department, which, apart from certain tourist and poster literature, is the source usually relied upon for information, bears the title "Ontario Game and Fisheries Laws." This title rather obscures the fact that two different sets of regulations are contained, Dominion and Provincial, and that the booklet, while actually containing a statement of most, but not all, of the regulations applicable to game-fish, and fisheries of Ontario, is principally a statement of the Provincial Game and Fisheries Act with amendments. A prefatory or explanatory statement setting forth the differences in the regulations and more especially mentioning the exclusive duties of the Province in respect of enforcement, or perhaps, as a matter of information describing other services also rendered would in all probability be advantageous.

Again, the Provincial Act combines regulations applicable both to game (birds and mammals) and, with some exceptions, fish (game-fish and commercial). So far as the respective interests of game and game-fish are concerned, there is little in common. Game-fishermen operate during the summer and have a local setting very different from that characterizing the hunting season. If the Provincial Act were stated in such a way as to divide the regulations the provisions applicable to both would be more easily intelligible.

While in many ways game and commercial fishes represent two very different interests, it is a matter of ordinary experience, abundantly illustrated in the course of this enquiry, that they are very much in contact. It is practically necessary for purposes of adjustment that each interest should understand the needs and expected privileges of the other. It is noticeable that the regulations referring to commercial fishing are largely omitted from the Blue Book. Some of the discussions which have taken place show that sportsmen do not know the commercial fishing regulations and therefore are neither in the position of being able to appreciate the needs of the industry, but what is more significant from the point of view of the present enquiry, they are not in a position to report what they may consider to be commercial invasions, illegal or otherwise, of game-fish areas or conditions.

Furthermore, so much has been said in the course of this enquiry concerning pollution of waters and its effect upon game-fish supply, that it would be well to consider whether it would not be desirable to include in the statement of the regulations the particular clause concerning pollution which is a prominent feature of the Dominion Fisheries Act.

Consideration might also be given to the point as to whether any of the regulations individually might be more clearly worded, as, for example, the Provincial regulation (Section 65) governing seizure. The possessions and articles seizable under this regulation are rather more inclusive than probably intended, since it is not specifically stated to what extent they must have been employed directly or indirectly in committing the offence. At any rate, several comments were made regarding this particular regulation. It would appear that public respect for such an obviously important provision is dependent upon the assurance that the punishment will fit the crime, and in this particular instance practically no discretion is or apparently can be allowed to the field officer effecting the seizure.

13.—Public Education

Reference has already been made in this report to the necessity of improving public opinion upon conservational matters in general, and game-fish protection in particular. The Ontario Federation of Anglers has endeavoured to make clear to the Committee that, in so far as development of public opinion is concerned, the sportsmen of the Province have already publicly demonstrated the case, and therefore it is now for the Province to take action. This view appears to the Committee to be substantially correct. It is unlikely that anything like an overwhelming sentiment in favor of conservation will be developed in Ontario for a long time to come, notwithstanding that every thoughtful element in the Province would understand its justice and value. It is a case where leadership must be shown, and where indifference and inertia might easily result in entire depletion of our game-fish and other resources before the loss would be generally realized.

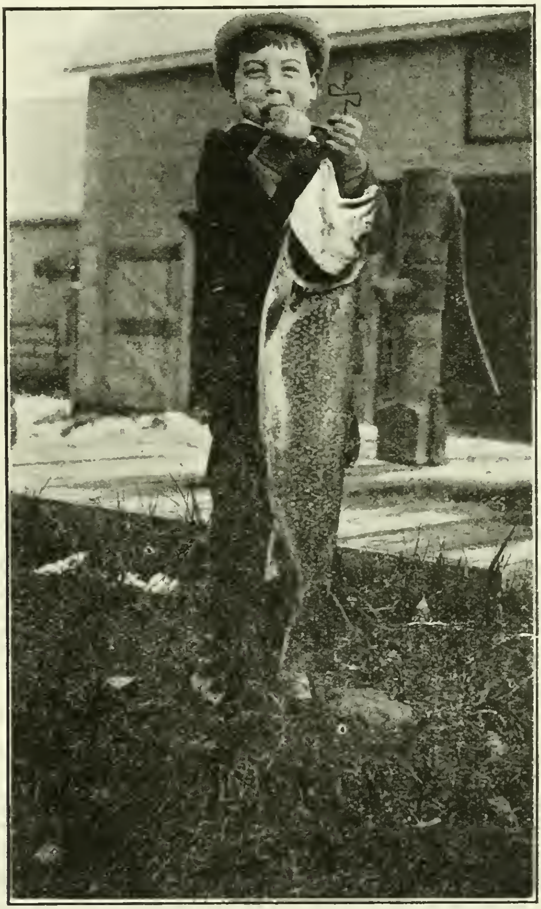
It is necessary, therefore, to put into operation any educational influence that can be brought to bear on the situation so that as time goes on our people will think more about conservation and its productive values and less about the personal freedom of destroying plant and animal life. Such a change of sentiment will come about only by continuous public advertisement of the conservational issue. The problem, like other great public issues, will ultimately be solved through the public schools.

Both the general public and especially that part of it interested in one way or another in outdoor sports, travel or fishing, could easily be reached through the medium of attractive, well illustrated literature, and there are many sources through which the supply of the necessary information and illustrative material could be arranged. The production and issue of this literature should be organized and paid for by the Government, preferably under some sort of publicity arrangement. The type of publication most likely to be acceptable, as regards game-fishes, would be one giving authoritative information concerning natural history of the chief species, travel routes or fishing waters, licenses required, and the needs of conservation coupled with a friendly but direct statement or warning that we want and expect our laws to be observed.

Literature of this type, preferably in some variety, should be available in all hotels, tourist agencies, railway and steamboat offices.

Public signs and posters, more especially those made to withstand weather, would, especially in all remote situations, contribute greatly to public education. Like the fire prevention posters which nowadays everyone expects to see in the north country, game-fish posters would command public attention in places where most necessary and would undoubtedly serve a useful purpose. Pennsylvania, for example, has a game-fish slogan made up in various forms, one of which is a black and yellow metal plate bearing the figure of a fish and accompanied by the laconic observation, "Want good fishing? Obey the law." Such posters undoubtedly have a psychological effect, not only inviting respect and consideration for the regulations, but also providing a general air of confidence in regions where game-fishing is a common recreation.

Essay contests in schools have been shown by the Toronto Anglers' Association to be a valuable method of handling the school situation. The proper organization of the conservational work cannot in respect of the schools, however, take place except through a lead given by the Provincial Department of Education. In view of the fact that Government service is concerned in so many ways with the natural resources and conservation, it would be worth while considering whether in the general interest some detailed reference to conservation should form part of the school curriculum. There is already some reference to nature study, and it may be that a certain purpose and direction could be given towards teaching conservation, or that work along the latter line could be formally arranged. In either case it would be necessary to prepare texts and suggestions by which stated instruction could be carried out. The offering of prizes, or setting up competitions between schools could be managed through the co-operation of local associations.



A 25-pound lake trout taken near Westport,
Ontario, August, 1928.

GAME-FISH POLICY

1.—Differential Regulation

Reference to existing regulations governing the taking of game-fish indicates that the principle followed for the most part assumes that these regulations should apply uniformly to all parts of the Province. Such exceptions as are made do not appear to be related to conditions fundamentally important, namely, of physical or environmental nature such as affect the spawning or growth of the fishes themselves.

As pointed out in a previous section, the Province is remarkable for its great diversity of geographical, geological and climatic conditions. The nature of these conditions has not been scientifically determined to the extent that the information would be conclusive for estimating closed seasons, minimum sizes and similar arrangements for protecting the natural propagation and growth of the various species concerned. Sufficient, however, is known to demonstrate that the principle of having uniform regulations applicable to the Province as a whole is, from this point of view, fundamentally unsound. Practical demonstration of the effect of endeavouring to keep regulations uniform, irrespective of local conditions is afforded by the recent discussion on the part of the sportsmen from different sections of the Province as to the principle underlying the extension of the closed season for the bass and maskinonge to July 1.

The Committee is of opinion that in making permanent regulations, or in recommending changes to the Dominion Government according to the constituted authority, full consideration should be given to the desirability of making effective zoning arrangements to meet the requirements of different sections of the Province.

These requirements should be estimated as primarily for the purpose of covering close season and growth, to be determined accurately by study of the situation, secondarily, for the purpose of effecting greater restriction where there is greater depletion, and finally to meet reasonable local requests as to greater protection or other desirable changes.

It is probable that in the future, as knowledge of the natural requirements of the different parts of the Province expands, the necessity of establishing zoning regulations will become more and more evident.

2.—Game and Semi-game Fishes

Game-fish are specified according to the Dominion regulations to include large and small-mouthed black bass, maskinonge, salmon, speckled trout, brown trout and rainbow trout. What constitutes a game-fish in popular definition or estimation, however, depends to a considerable extent on the habit or ability of a fish to accept an angler's lure and to fight not too clumsily for freedom. It also depends upon what choice the water affords as to variety of species and their respective sport qualities or palatability. Thus at any one place or time, either with good or poor fishing, the acceptability of a species as a game-fish will depend upon several factors.

In Ontario at the present time, large or small-mouthed bass, speckled or other trout, or maskinonge may be individually favoured. Under conditions of reduced plentitude of any one of these species, another species, when otherwise available in a particular region within range or in the same water, may become a substitute and therefore the predominant game-fish. The same is true of fishes not wholly ranked as game-fishes in popular estimation, more especially pike, pickerel and lake trout, any one of which may be occasionally preferred even in comparison with those above mentioned, but is more likely to be accepted as a substitute than as a game-fish of principal rank.

Pike, pickerel and lake trout are common inhabitants of waters in which commercial fishing is not permitted. They have therefore a position which naturally associates them with game-fish interests, and they are also very generally appreciated and made use of in this way.

On the other hand the increase in demand upon the recognized game-fishes indicates clearly the advisability of having both as many species as possible turned to game-fish account and also the advisability of increasing the areas reserved for game-fishing purposes.

This involves some change of policy in the direction of game-fish or semi-game fish recognition of these species, which the Committee commends for consideration, and also a revision of the permits and privileges now existing as between game-fish and commercial fish utilization.

This matter will be discussed in a later section (cf. p. 222) dealing with fishing licenses in inland and Great Lake waters. The present statement aims simply to indicate that under the conditions now existing there is needed in Ontario a better understanding and definition of what constitute game-fishes, and recognition of the fact that increase in the game-fish interest puts a new complexion on the situation as regards game and commercial fishing.

3.—Further Reservation of Game-fish Waters

One of the outstanding features of the present situation in Ontario is the new lead which is being given to fishery management through the increase in importance and monetary value of the game-fish interest. The outlook is very different from that previously in the public mind because there has always been a tendency to emphasize the commercial fisheries on the basis of their obvious value as a component of industrial production.

While it may be claimed that the demands now made by the sport and tourist element might have been anticipated, in view of experience elsewhere, the opinion expressed by many sportsmen that we have neglected game-fish interests should be considered rather in the light that we have recently become impressed by the rapid increase of tourist movement, its value, and perhaps more especially by the possibility that all tourist waters, old and new, are now easily susceptible to depletion.

This newer alignment of interest seriously calls for some re-consideration of the respective privileges of game and commercial fishermen. It is a matter very much under discussion by sportsmen and naturally one also in which commercial fishing interest and the progress of the industry are vitally concerned.

In the course of the present investigation, discussion has centred around Lake Erie, the northern portion of the Lake of the Woods, Lake Nipissing, the main, eastern and northern shore of Georgian Bay, and certain lakes of Prince Edward County. In general, it has raised the question as to how the respective interests may be served or delimited.

There has been in Ontario a sort of general policy or tradition that the waters of the Great Lakes are predominantly commercial fish waters, and that the inland lakes and streams are game-fish waters. This differentiation of game-fishing and commercial fishing waters has had some value, but has necessarily been impossible of complete realization. Game fishermen have for example always had shore angling interests on the Great Lakes, while some of the inland waters, chiefly the larger, such as Lake Nipissing, Nipigon and Simcoe, have not been reserved for game-fish waters.

The larger areas which may be described as in a very uncertain position as regards the commercial or game-fish interest, include parts of Lake Erie, the Lake of the Woods, Nipigon, Nipissing, Simcoe, the main shore waters of Georgian Bay and the North channel, as well as smaller inland lakes in which commercial fishing takes place.

As regards the species of fish which may be said to relate predominately to one interest or the other, it may be observed that many years ago, no particular distinction was drawn, fish of all kinds being freely taken and sold. Later, the different natural characteristics of the species, and the different requirements of fishing, led to the distinction by which the capture of maskinonge, speckled trout or bass became the exclusive privilege of sportsmen, while on the other hand the capture of whitefish and herring became the privilege, though not in an exclusive sense, of commercial fishermen. Such species as lake trout, pickerel and pike were left in a middle position, and in general have been regarded as desirable from both game and commercial points of view.

Commercial and sport fishermen have as a rule little in common. Except under unusual conditions they operate in different fields under different working conditions, and for very different purposes. Where their interests overlap, as they do with respect to certain species of fish as above described, and also wherever inshore commercial fishing takes place in regions occupied by sportsmen or summer residents, it is not to be expected that the requirements of both can be met without some sacrifice or injury to one. The only likely exception, which is in fact beginning to be illustrated, is the turning of the commercial element to the service of the tourist trade. Fishermen by virtue of their training, experience and equipment are in a very advantageous position to serve the tourist requirement, and probably would already have gone farther in this direction in Ontario had it not been for the isolation that has come about by most of the commercial trade being of an export nature.

As regards the respective claims which sportsmen or commercial fishermen may have for consideration, it will be noted first that sportsmen and tourists, though enjoying a certain exclusiveness of privilege in respect of waters removed from commercial fishing, are not considered as having any special right to reservation of their fishing waters, notwithstanding the often substantial establishments maintained, land taxes paid and valuable contributions made to communities in which tourist business is more or less relied upon as a source of livelihood.

On the other hand, commercial fishermen are recognized as having investment rights, represented by their material assets of boats, gear, ice-houses, wharves and even of established occupation of fishing grounds, such rights being of the nature of moral rights in respect to waters presumed to be entirely public, but nevertheless commonly recognized, and strengthened by general appreciation of the hardship and peril incident to fishing operations in the open water.

As to the respective values to the Province at large, there is an enormous disproportion between the revenue derived from commercial and tourist sources. In 1927, the value of the commercial fisheries is reported at somewhat less than three and one-quarter million dollars. It is impossible to state how much of this revenue would be sacrificed if every area reasonably needed for game-fish or tourist purposes were to be closed to commercial fishing. The total area, however would form a very small part in proportion to that which commercial fishermen normally have in the Great Lakes and which could never be of game-fish importance.

By comparison, the game-fish interest and value is represented only approximately as a component of the tourist trade estimated for the same year at some eighty-three million dollars. Although many reservations may be made as to what value should be placed on the game-fish attraction, it is obvious that the disproportion between the commercial and game-fish revenue would still be so great as not to modify the general conclusion.

What is needed therefore is a new alignment of the game-fish requirement, which may be stated to mean that wherever there are clean attractive shore lines, with good game-fishing and with residential sites, camps or hotels becoming occupied by large numbers of summer visitors, the immediate water area should be reserved for game-fishing. This game-fishing reservation should, for reasons of protecting the supply, not only include species such as maskinonge or bass, which are game-fishes in a strict sense, but also semi-game or substitutive fishes such as lake trout, pickerel or pike.

Because of the prevalent idea that the inland lakes are predominantly game-fish waters, the general view of sportsmen is that all commercial fishing should be eliminated. A more fundamental issue, however, seems to be that, whether in inland lakes or in the Great Lakes, commercial fishing in deep or "fathom" water is not likely (with some exceptions) to harm the game-fish supply, while on the other hand any kind of operation of gill-net, pound-net, hoop-net, or seine in inshore water most assuredly will. It is this inshore water which constitutes the critical issue in so far as the game-fish interest is concerned.

On this basis and for the various reasons stated above the outline of a constructive policy would seem to be as follows:—

Reduce, and when commercial fishing becomes undesirable because of increase in game-fish interest, refuse commercial licenses in inland waters, especially ensuring protection of inshore waters. Such a plan would have to be developed progressively during the next few years. It would undoubtedly affect seriously certain fishermen who have inshore netting privileges of one kind and another. It would, on the other hand, serve the useful purpose of doing away with the free-for-all expectation that licenses for inland waters and especially small lakes can be obtained from the Department. In any case, if the inshore fishing is to be cut down, it would be better to start now than passively maintain a situation which is becoming more and more unpopular, and which would, in the natural course of events, lead to rapid depletion of the game-fish supply.

It will be seen that the question of inshore fishing involves both general commercial fishing as above designated and removal of undesired species. The latter of which should not in any case be open to commercial license.

Local situations calling for restriction or withdrawal of commercial fishing privileges should be handled as far as possible by local conference so that compensatory arrangements for loss of trade or custom may be to some extent provided for.

Special consideration should be given to the claims of local associations on behalf of the non-resident tourist population.

4.—Diversity of Authority in Relation to Depletion

In the course of this investigation, it has frequently been brought home to the Committee that there is a potential and probably effective factor of loss to conservational effort in the division of authority as between the Province and the Dominion, and in the case of the Great Lakes which are international waters, in the diversity of authority as represented by either or both of these and by the individual States bordering upon the Great Lakes and the Federal Government of the United States.

Whether substantially founded or not, there seems to be a reasonable basis for the conclusion that no consistent effort has been made to ensure uniform protective regulations.

As between the Province and the Dominion, though they alone are not exclusively concerned, there is for example the fact that certain species, lake trout, pickerel, and whitefish are protected by close season regulations in inland waters but not in the Great Lakes. Yet Ontario as one of the Canadian provinces has practically undivided interest in the Great Lakes fisheries, supplies all the protective service and operates all the hatcheries on the Canadian side. Whether necessary or otherwise, it is made to appear that the Province is in the position of trying to maintain by artificial propagation a supply which in part at least should normally be produced by natural propagation and favoured by wise regulation of close season.

The larger issue as between the Province and the tier of States bordering on the Great Lakes is naturally a more complicated one, but in which uniformity of legislation is still the principal consideration. There is in respect of this situation a common impression, probably well founded, that the interests of conservation are in general suffering from the lack of adjustment of various inequalities in the way of fishing privileges granted to citizens of one State or another or to those of the Province.

In many ways the history of fisheries legislation on both sides of the international boundary in respect of Great Lake waters is of outstanding interest. The tracing of the influences which in one way or another have been brought to bear on the fisheries during the last thirty years does not impress one with the conviction that a great deal of progress has been made along conservational lines, unless perhaps that there has been at least some effort in the direction of maintaining protective service, restriction, and fish culture which might otherwise have been allowed to lapse. While there is plenty of suggestion available in older reports as to the desirability of uniform action, there is perhaps at the present time more actual disposition than ever before to adjust by conference specific differences of legislation or practice, to recognize the necessity of combined action and to seek means of solution.

Protective Service Organization and Accessories

There is no part of the game-fish problem in Ontario which is so closely connected with game-fish depletion and at the same time so difficult of solution as that of providing effective service for game-fish protection. In view of the numerous comments that have been brought to the Committee, it would be wrong to overlook or minimize the fact that among the sportsmen of the Province there is a great deal of doubt as to the ability of the service to cope with the situation. Sportsmen generally realize, however, the great objective difficulties which have to be overcome in planning and carrying out protective service adequate to the varied conditions which obtain in various parts of the Province.

It will be borne in mind that both the administrative officers and the field men who are concerned with protective service have a great many duties besides policing for game-fish protection, so that in discussing the latter issue it is important to remember that only one phase of their work is being reviewed.

The protective service may be briefly described as consisting of six principal district officers or superintendents, some seventy overseers and special patrol field men and ten patrol boats operating in various waters of the Province. To this permanent force there are added special and seasonal officers, and the accessory services implied both in the appointment of deputies and in the duties specified for guides.

In view of the discussion which is to follow, it may be observed here that the basis upon which the protective service may be best considered from the point of view of possible improvement would appear to be:

(*a*) Recognition of the fact that while there are various local needs, the chief obligation of the Provincial Government is to provide a fair distribution of service, and therefore that there can be no protection afforded to one part of the Province more so than to another having similar requirements. This very obvious principle is so generally overlooked as a result of local enthusiasm that it would seem to be worth while enquiring to what extent the work of the Government is impeded by demands for local additions to the protective service rather than assisted by general co-operation in building up a strong protective system for the Province as a whole.

(*b*) While there has been little public comment on the major subdivision of the external or field service, the number and distribution of district superintendents in relation to the work of the local overseers and possibly to the public appears to present some features worthy of consideration.

(*c*) Comments are fairly frequent as to the qualifications necessary for field service such as overseers are expected to render, and as to occasional existence of incompetence or lack of qualification in the force. Representations on the subject are usually very indefinite, but at least two lines of action are indicated, namely, that such elements of unfitness for the work should be promptly eliminated, and that some more definite means should be applied of ascertaining by external enquiry to what extent the field officer is or is likely to become efficient. If the number of men employed is relatively so small as to raise widespread doubt as to their being able to cover their respective territories effectively, there would appear to be just so much more reason for seeing that these men should be of the active, capable and interested type.

(*d*) The fact that the Provincial Government through its various departments has to supply a great deal of service in outlying parts of the Province and for that purpose to employ a large body of men, suggests the possibility that a greater degree of co-operation might profitably be encouraged without interfering with the proper duties of the respective services. Fish and game officers, especially would profit by such co-operation if only in the way of receiving casual information concerning actual or suspected law infractions.

(*e*) The existence of various kinds of public bodies, such as sportsmen's, tourist, guide or trade associations, having a particular interest in game-fish matters, suggests the further possibility of making greater use of their membership for protective and conservational purposes.

(*f*) Judging from sentiment expressed throughout the Province, especially as regards the rapid increase in tourist revenue and the demands made upon the Government service for game and game-fish protection, it would appear that the time is ripe for a far-reaching reconsideration of the present and probable future requirements with a view to substantial improvement in organization and addition to the force of field officers.

1.—General Outlook of the Service

The effectiveness of any service which is designed to prevent petty law breaking is bound to depend to a very large extent upon the principles instilled into the field officers, and upon their training or ability to handle the situations presented. As indicated in a previous section concerning the public relation of the administrative service, it is entirely probable that with requirements so complex as we have in this Province, a great deal of advantage is to be expected of friendly co-operation between the service and the public at large. It is not to be supposed that the worst types of offenders can be reached by a process of moral persuasion, but unless that is a great deal of willing public assistance, the prevention of law breaking, especially in the enormous areas of the northern part of the Province, by a handful of field officers, is utterly impossible. It is easy to see that if district superintendents, overseers and boat patrols had more informative open relations to the resident community and tourist elements the situation might be greatly improved.

During a recent visit to the northwestern section of the Province, the Committee was greatly impressed with the spirit of co-operation shown by various elements, game-fishing, commercial fishing and industrial interests towards the departmental service. But, on the other hand, there is a rather widespread sentiment in the Province that the service operates too much in the manner of a sort of detective or police agency and is not usually heard of unless some offender is caught. Such an impression may be wrong in most respects but is perhaps naturally engendered because the Department's services are not, generally speaking, brought to the notice of the people in more constructive ways.

2.—District Superintendents

The only representations which have come to the Committee respecting the principal field officers in relation to the protective service refer either to the general outlook as outlined above or specifically to the need of additional representation in the northern parts of the Province.

In the opinion of the Committee, it would be better if the various district superintendents had more freedom of control in their respective areas, more especially in the leadership of their men and in encouraging organization and harmonious operation of local associations. Any fear that may be entertained that by so doing the work or authority of the Department may be compromised or weakened should be thrown aside in favour of a clear cut statement of the regulations and of the Department's policy which any officer may be free to publicly state or, if necessary, advertise.

Representation northwards now consists of three officers located respectively at North Bay, Fort William and Sioux Lookout. The area served by these officers is a very large one, while the responsibilities are rapidly increasing through the movement of tourists along the northern shores of Lake Superior and Huron, and by rail and motor road into the back country, as well as by industrial developments taking place throughout the region. It has been suggested, and the Committee is in accord with the principle, that the allocation should be made according to the Provincial districts, Kenora, Rainy River, Thunder Bay, Algoma, Sudbury and Nipissing, with proper reference, however, to economy of service, and the more immediate needs, more especially perhaps in relation to tourist movement, which exist in these districts.

3.—OVERSEERS

The present staff of overseers is commonly reported to be far too small to really accomplish what is needed, either in checking up on summer tourists or in protecting the fish during the off seasons. Throughout the Province, and even in the more densely populated southern portion, there is general insistence upon the appointment of more overseers. The situation is obviously one which has to be seriously considered, but the Committee is unable to suggest either the number or the allocation of the additional men, or further to find any great amount of assurance that the increased number will result in more than a very small improvement in the situation. A moderate increase in the number of overseers distributed throughout the Province would in all probability not result in any noticeable change. The expense of doubling or tripling the number would require at least $75,000 or $150,000 additional appropriation, but might nevertheless be advisable in view of present and expected requirements. The greatest need appears to be in regions where, owing to inaccessibility or peculiar conformation of the shore line, detection of offenders is unusually difficult or, on the other hand, in waters occupied by large numbers of tourists.

In the opinion of many sportsmen and others who are informed as to conditions in important tourist centres the Department now loses in uncollected and misused licenses more than sufficient to pay the difference implied in the cost of additional overseers, provided means of effectively checking up on licenses were in operation. It is pointed out also that the Province has instituted within recent years a provincial land tax for unorganized districts, and that summer tourists so taxed should have some more definite protective service. No accurate computation can, however, be made on either of these bases.

In addition to the small number of overseers, there is general comment on the probability that the service could with advantage be further organized. Certain concrete suggestions have been made: for example, that the overseers should be supplied with better equipment for their work, that they should be in uniform, that the system should be organized to maintain a field force of young active men, that there are avoidable difficulties in effecting prosecutions, and that there is a lack of co-ordination of overseer work and public assistance.

Regarding the question of equipment, there is doubtless a very great difference in respect of requirements as between the fall, winter and spring months, on the one hand, and the summer months, on the other. In the former case, the poacher has the advantage of distance, to a certain extent also of telephone service by which the whereabouts of the overseer may be reported to him, and in many places he profits by the fact that there are few people moving and he is therefore free from observation. During the period of the spring break up and directly afterwards, throughout a large section of the Province, his position or place of operation is likely to be inaccessible.

During the summer months, it is probable that on the average the chief obligations of the service are in the direction of supervising summer tourist operations on the game-fish side, incidentally perhaps checking up on illegal operations otherwise connected directly or indirectly with summer trade. In this position, the overseer, unless he exercises a great deal of ingenuity, is likely to be outclassed simply because many of the people he has to watch are provided with speedy and sometimes elaborately expensive motor boat equipment with which he can scarcely compete. In fact, anyone possessing an inexpensive outboard motor equipment can, under the conditions existing in most tourist waters, evade the overseer.

It is obviously impossible for the overseers to supply their own equipment except in an incidental way. Some plan should therefore be devised by which the men should obtain field equipment adequate to their particular lines or needs of operation.

The fact that our overseers are not in uniform is obviously disadvantageous, first, because the uniform commands respect, and second because it is a warning of organized service which many tourists, not acquainted with our institutions, may readily think we lack. Further, while in some cases the overseer would be more successful in plain clothes, there are also situations in the apprehension of offenders in which the lack of uniform is dangerous for the reason that law breakers generally assume that it is safer to maltreat a citizen than an officer.

Several comments have been received by the Committee as to the personal ability or activity of overseers, that some are too old to carry on their duties, sone inactive or indifferent to the duties of the service, and some in service for political reasons rather than because of qualification for the work. There is, on the other hand, general appreciation of the work being done by the overseers under difficult conditions and of the services rendered both to the Department and to conservation by some of the older men.

All this may be taken as an indication, not that we have a system deserving of criticism, but that we should look forward constructively to the growth and development of an overseer or guardian organization that would meet the ever increasing obligations of field service and also operate in the best interests of the force.

There appear to be two possible ways of effecting this development. One of them concerns the fish and game overseers as a unit. The other concerns the entire provincial field service. The Committee recommends both of these for further consideration.

The principles underlying the organization of the overseer service as a departmental unit ought in general to follow the same lines as have been found necessary in police, military, and transportation organizations, the chief requirements of which have to do with all-year-round outside or field service, qualification, training and grade promotion. The field service should be composed of young active men with proper physique and qualifications who can be specially trained for the work. They should be uniformed and operate under a special discipline adjusted to the needs of the service. The problem of what to do with the older men who have given loyal service to the Department, and of encouraging younger men who render outstanding service in the field must be met by some system of promotion similar to that employed in analogous organizations. Such changes in the direction of more exacting requirements will demand revision upwards both of the ordinary scales of pay and of the financial arrangements and allowances for promotion in the service.

As regards the second possibility, it may be pointed out as worthy of consideration that the Province has in its various departmental and service organizations a very large obligation to meet in the matter of external or field service of various kinds and concerning an enormously large area. The natural tendency is for each type of field officer, assigned as he is to particular duties under departmental instructions, to become a sort of specialist who perhaps does not feel it to be his particular concern if law breaking goes on under his observation so long as it is not in his field. While it would not be practicable in Ontario to overlap services in the same way as apparently takes place in some of the States, there might at least be effective co-operation to the extent that field officers, such as game and fish overseers, fire rangers and provincial police, should, without departure from their respective duties, report wherever possible infractions of the laws.

Another element which may possibly enter into the situation is the source of supply and training of field officers of different kinds. If the Province contents itself with casual appointments, no particular organization, discipline, or technical training of the men is practicable. On the other hand, the sources of supply of men, fundamental training and ordinary discipline being more or less common to all, the organization of a more comprehensive training corps might be of distinct value to several ramifications of the Government service.

4.—Prosecutions and Penalties

As described more fully elsewhere in this report, the regulations relating to the fisheries in general seem to be in need of clarification. To make these regulations say specifically what is intended and in simple language is a matter which should be left to qualified legal experts. There are, however, certain phases of the method of handling infractions of the laws relating to game-fish, and also some uncertainties in interpretation, which have been brought to the notice of the Committee and are probably of some importance to effective work.

The first of these has to do with the authority of overseers or other field officers in effecting or recommending prosecution for pollution of inland waters. A similar situation exists with reference to the pollution of game-fish areas in the Great Lakes, and this situation is, if anything, more difficult for provincial officers because of the Dominion interest in the control of these waters. Pollution from the fishery standpoint is definitely covered by Dominion regulation, but there seems to be no certainty as to how the provision regarding prosecution should be carried out. There is especially no recognition of the point in the regulations as transcribed and issued in book form by the Province. Little co-operation can therefore be expected of the public; and although there is considerable complaint, there is little likelihood of building up public opinion until a definite method of handling this situation is devised.

A second difficulty has to do with the kind of evidence upon which the law relies and which field officers have therefore to observe. Generally speaking, apparatus or fishing gear set illegally must be seized if found, but prosecution follows only if the individual concerned is caught red-handed, or in some cases perhaps if the catch is found illegally in his possession, which, in the case of fish, may not be easy. The evidence of witnesses, or information received concerning infraction is likely to be of no application except as a guide to the authorities as to whom to watch.

The detection and prosecution of offences against the game and fish regulations is, under ordinary circumstances, about the most difficult kind of work that falls to the lot of policing authorities. The offender has all the advantage of seasonal and geographical isolation to carry on his operations. He now has good roads and telephones to help himself and his fellows. The overseer, on the other hand, is alone, most often in Ontario in the wilderness, is usually dependent purely on his own wits, and yet is practically obliged to catch his man at the moment when engaged in the illegal operation.

It is clear that any expansion of the scope of evidence, even if circumstantial, that would be legally acceptable, would be advantageous, as would also be the provision of some legalized method of controlling individuals whose operations have been several times complained about. As the situation is now, there is a general sentiment throughout the Province that although the poacher may be locally well known, his operations are comparatively safe from detection.

Again, there is a fairly widespread conviction that in the prosecution of offences under the game laws, offenders are treated too leniently. If true, this is, in all probability, a matter of public opinion not appreciating fully the relative seriousness of game law infractions. It is possible also that the ordinary penalties as opposed to seizures, are not sufficiently severe. There is some sentiment to the effect that minimum panalties should be considerably increased, though persons making this suggestion sometimes fail to realize that high minimum penalties may work undeserved hardship in certain cases.

The attention of the Committee has also been called to the fact that the regulation referring to confiscation or seizure is so obligatory upon overseers and so comprehensive that a great deal of its value is lost through the manifest difficulty of applying it. While overseers are bound by duty to carry out the provisions of the Act, some hesitation may be expected in respect of a charge making it obligatory to seize all that a man owns that could be used in breaking the law, whether or not in the particular case actually and immediately used for the purpose.

Finally, it may be pointed out that, whether for causes incident to the construction or administration of the regulations, there seems to be throughout the Province a fundamentally wrong relation between the field officer and the public. As mentioned elsewhere, this relation ought to be friendly rather than detective, in which case it would naturally be expected that the overseer should have some discretionary powers by which local sentiment could be improved and the outlaw element more definitely marked for later detection and prosecution.

5.—GUIDES

The terms and conditions under which individuals obtain employment as guides to sportsmen or fishing parties and their relations to the employers, to the Department, and to conservation work, have been adversely commented upon at various times during this investigation. It is urged that no great benefit results from the plan of issuing guides' licenses, except that the Department obtains a fee and therefore an additional source of revenue. It is represented that while a sportsman employing a guide licensed by the Government expects to have a man whose fitness for the work has received official approval, the fact of the matter is that any person, not previously convicted of a breach of the regulations, can obtain a license whether he has any qualifications or not. This rather extreme view of the case is probably to be taken rather as a general arraignment of the method of handling the situation, and does not reflect upon the excellent intentions, abilities and services of perhaps the majority of guides in various parts of the Province.

There is, no doubt, a great deal of justice in the criticism because guide licenses are commonly issued by or through the medium of persons who pay absolutely no attention to qualifications, and so far as the committee is informed there are comparatively few instances in which licenses are refused. It may very easily happen that the guide is a man of no moral intention of observing the game laws himself, or that he does not know how to handle boats or take care of people entrusted to his care on the water. He may have had no particular experience either with game-fishing or with the waters with which he is naturally presumed to be familiar.

Guides ought to be a select body of men. They need not be expected to be men of school education, but they should have qualifications for their work in addition to duties prescribed in the keeping of the game laws. The general tone of the service should be carefully guarded from the point of view of improvement of the service itself and the elimination of undesirables. The responsibility of defining qualifications, and of effecting any raising of standards, lies with the Department of Game and Fisheries.

A number of suggestions have been made as to how improvement could be effected.

In places where several guides are in employment, the formation of a Guides' Association would doubtless result in general discussion of qualifications by which, with proper co-operation of the Department, undesirable persons would be prevented from obtaining licenses. The Committee was informed that in at least three places in the Province, such associations exist. They are managed, however, in each case by experienced resort owners who are themselves interested in maintaining a high standard of service. Doubtless by arrangement or suggestion from the Department the number of such associations could be greatly increased.

Second, it would be advisable to issue to persons handling licenses for the Department, to hotel keepers and guides, a booklet setting forth not only the requirements for seeing that sportsmen obey the law, but also a list of expected qualifications, together with some useful information concerning forest damage, and more especially concerning a sanitary supply of drinking water, disposal of waste and general sanitation.

Third, since the Department is likely to have no way, except through its officers or other officers of the provincial service, in getting at the qualifications of applicants for guide licenses, some method should be devised of obtaining satisfactory references. In obtaining these references, it should be borne in mind that practically every tourist centre has a rascal or two, men who work for tourists and who ply their trade without hindrance simply because local residents do not wish or are afraid to report them. Information should, therefore, be sought, invited and confidentially handled, so that if, for example, there were two or three complaints, the man might, on the next occasion of licensing, be refused.

It is scarcely necessary to point out that many of the guides employed throughout the Province are intelligent men who have keen insight into details of natural history which enables them to know peculiarities of the behaviour of fishes, times and conditions of spawning and similar matters of fundamental value. Sometimes their information is detached and unorganized, but it has the advantage of being observationally correct. A great deal of use could be made of these men by asking them to make seasonal observations and by giving them the necessary instructions as to what to look for. Such a procedure would doubtless add much to their working efficiency.

6.—Local Associations

In view of conditions existing at the present time in Ontario as regards the large area to be covered and the improbability that the Department alone and unaided will be able to handle the protective service, the assistance made possible through the existence and further organization of local bodies of sportsmen and conservationists is of the greatest significance.

Some fifty of these organizations already exist in Ontario, and, as indicated by the formation of the Ontario Federation of Anglers, there is a definite movement towards the consolidation of a provincial organization. There has been also more or less suggestion of the formation of a Canadian Association, which would probably be most effective if it represented an amalgamation of provincial organizations. In the United States, there has been a great deal of organization along conservational lines, and a particular reference to game-fish conservation is indicated by the Isaak Walton League, which includes some 2,900 chapters and 160,000 members, and, incidentally, has one or two branches in Ontario.

The most important matter to be primarily understood concerning these associations is to make absolutely clear that they stand four-square on conservational principles. In the past, there has been some suspicion, probably for the most part not well-founded, that a given local association was more concerned about getting privileges for its own members than about protecting animal life. Such a condition is, at the present time, unlikely, yet it would be worth while, for the sake of commanding public opinion, that every association in drawing up its constitution should state its intentions in unmistakable terms and make its membership conform absolutely to those conditions. Under these circumstances, the formulation of a general platform which could be used by any number of local organizations, by a federation of them, or accepted as a general agreement between the Department and the associations, would be most advantageous.

In the course of the present investigation, various enquiries have been made by the Committee as to what the working relation is between certain associations and the Government service; more especially what these associations need in order to prosper, and how they can best be turned to account for the purpose of game-fish protection.

At the present time, the Department by special notice requests the co-operation of sportsmen and others in reporting violations which come under their notice, and Game Protection Clubs are requested to send copies of their by-laws and lists of officers. This undoubtedly is a move in the right direction, and with due reference to the responsibility of the Department could be advantageously extended.

It is important to realize the co-operation must be on some sort of reciprocal basis.

In this situation, probably the first essential on the part of the Government service is to give these associations some kind of an official rating so that their relation as societies accessory or informational with reference to the service may be established. They might even be assigned definite duties, which would perhaps be mainly along the lines of recommending the local personnel of overseers, special seasonal overseers, deputies and guides. It is obvious that the permanency of a local association depends upon having a prescribed work to do, and that both responsibility and enthusiasm usually thrive to the extent that authority is given.

It is very necessary that the local associations throughout Ontario should have more definite means than they now have of encouraging local interest and enthusiasm. A local association is composed of a variety of citizens of different vocations, but having a common meeting ground on the basis of fish, game, forest or tourist trade interest. It is unlikely that any individual will have available for use material for popular lectures, pictures, or experiences that are more than mere anecdotes of a sporting kind. Yet such material is of the greatest importance in holding an association together and in giving it an opportunity of linking in with the social life of the community and in that way building up membership helpful to conservation. The association is not in any way called upon to compete with local entertainment, but it has to have something worth while to use as the foundation of its meetings.

This gap has to be filled, and the only way in which it can be filled is by an extensive programme of local lectures, exhibitions, etc., arranged at least in part through the Government service and carried out by whatever means available. It may be pointed out that some work of this kind is now being done by the Department of Game and Fisheries and in a more general way by the Provincial University through its Extension Department and local public lectures. Especially with a publicity officer to represent and organize the service, a great deal could be accomplished in this direction with comparatively little effort, making use of various educational institutions and individuals throughout the Province, as well as persons representing various phases of natural resource work in the Government service.

LICENSES AND LICENSING SYSTEM

1.—Licenses

At the present time, the only type of license which comes into consideration as regards game-fish is the non-resident angling license. This is a fee of five dollars, to which is added fifty cents to be retained by the individual issuing the license. Every non-resident angler is expected to be in possession of this license which entitles him not only to fish but also to export a part of his catch.

In the operation of the non-resident licensing arrangements there appear to be a number of defects. The most outstanding of these is the lack of contact between the prospective applicant for a non-resident license and the issuer of such license. Under the present arrangement, the applicant, in most cases a summer tourist travelling through, is expected to make his enquiries as to who issues licenses, to go to some person, often, if not usually, a local tradesman, buy his license and pay an additional fee for its issue. If the prospective fisherman enters the Province through one of the ordinary Customs ports, he will be concerned with Dominion Customs arrangements and will not have his attention called to the fact that a provincial fishing license is required. Furthermore, if, after ascertaining where licenses may be procured, he calls at a trading establishment after hours, he will not get his license. And finally, if he is in a hurry, as most travellers are, he is likely, unless especially conscientious, to pass on into the wilds without much thought, or, in view of the scarcity of overseer service, without much later inconvenience. The opinion, which is substantiated in various quarters, that the great majority of tourists are conscientious, rather than that the arrangements made for the issue of licenses are good, is accountable in part for the fairly large and increasing amount of revenue that the Province derives from this source.

As regards the issue of licenses, there is, of course, a natural presumption that it should be in charge of the local officers. The fact that these officers are expected to be in the field is probably accountable for the policy of the Department in selecting others to do the work. There is a general sentiment to the effect that the officers should issue the licenses. Their personal presence or absence at the issue of a license is immaterial so long as there is some one in attendance at home or office to do it. Further, the issue of licenses by officers ought to relieve the Department of some expense or perhaps provide revenue to be used for accessories and equipment. It would be advantageous to establish personal contact between the officer and the applicant, because of the information which the officer can give and because of knowledge obtained by the applicant, of our protective system.

Several enquiries were made by the Committee as to the prevailing method of issuing licenses in the United States, and it appears that the applicant, whether resident or non-resident, applies for and receives his license from the clerk of the municipality concerned. This method has at least the advantage of connecting the issue of the license with a recognized municipal office and, no doubt, also of establishing a custom which is generally understood. In Ontario, however such a method would not be easily applicable.

In the opinion of the Committee, the issue of licenses by local tradesmen, or by anyone who directly profits by the tourist trade, is objectionable for reasons otherwise than above stated. If the tourist himself applies for a license, there is some profit and no feeling in the matter. A dealer, however, profiting otherwise from the tourist trade, is going to think twice before suggesting to the tourist that he has to have a license, and is, on the whole, not likely to do so.

It is obvious that the first step in checking up on the issue of licenses is to see that the non-resident angler is informed about the requirement as soon as he enters the Province. This can be done only at the point of entry, and the information must be available in printed form so that it can be readily brought to his notice or handed to him en route. It is probable that the Provincial Departments have other information, for example on highway regulation, or fire prevention, which could be handled in the same way. It may be that the Customs officers would co-operate by special arrangement with the Dominion Government, but this co operation, in order to be effective, would involve active effort in seeing that each non-resident tourist receives the necessary information. Otherwise, the provincial service should provide at the port of entry some means of conveying the information concerning provincial requirements which the tourist must observe.

It would be necessary also that every local association, Chamber of Commerce or Tourist Trade Bureau should have some notice posted with references to these licenses, and it would be advisable that similar notices should be prominently displayed in summer hotels, boarding houses and camps, so that no one catering to the tourist trade would be obliged to do more than inform the prospective applicant as to where or how the license might be obtained.

Any further checking up of licenses would have to be done by the local overseer, but there is no reason why, in addition to personal enquiry and vising of the license, the overseer should not be informed privately by guides, hotel-keepers, or others as to tourists who may have neglected to acquire their license.

It has come to the notice of the Committee that, in one instance at least, the non-resident fee is very undesirable. In accordance with the general custom, as between any two States or Provinces, the person living outside the State or Province must pay the non-resident angling fee. The Lake of the Woods, however, is predominantly a summer resort water for the people of Winnipeg and other places in Manitoba. The value to Kenora of this trade is considerable, apart from the investments made in respect of summer residence on the lake. The inconvenience of the non-resident fee as applied to visitors from the sister Province is a matter both of individual concern and of civic pride.

So far as the Committee is aware, no one of the Canadian provinces is especially generous in its interpretation of the non-resident angling license as regards other provinces, but some measure of greater recognition of the citizens of a sister province would seem to be in the general interest. In any event, the case of the Lake of the Woods is an outstanding one and should receive consideration.

In view of these circumstances, the Committee recommends re-consideration of the non-resident license as applied to waters traversed by inter-provincial boundaries, in the case of Ontario in relation either to Manitoba or to Quebec, a reciprocal plan might be formulated by which, for fishing in waters traversed by such boundaries, the non-resident license would not be required of citizens of an adjacent province. This arrangement would remove the present difficulty so far as the Lake of the Woods is concerned, and should be productive of good will in all other sections, similarly situated.

2.—Resident Rod License

There is, at present, no resident license in the Province, but the fact that a rod or angling license or a combined hunting and fishing license is prescribed with fee attached in forty of the United States, and the probability that additional sources of revenue and of registration may be necessary in Ontario if increased Government expenditures on game-fish protection are to be expected, has naturally given rise to some consideration of the advisability of establishing a resident permit and fee.

The advisability of establishing such a license with a nominal fee and with a minimum limit as to the age at which applied, has been generally discussed, both in the course of visits which the Committee made to certain parts of the Province and at the public meeting held in Toronto. While it is obvious that there would be objection, possibly in many quarters, to paying such a fee, the sentiment on the whole indicates that the establishment of a license and fee would have the good effect of bringing about registration of local anglers and of producing revenue. But there is also a general sentiment to the effect that in the event of such a license being established, the Government should apply the revenue directly to game-fish protection and propagation or other game-fish work. The suggestion has also been made that, for the benefit of farmers and others who fish only incidentally, it would be better to have the license apply only outside the limit of the county in which the individual resides.

Sentiment on the whole appears to favour the resident rod license if assurance can be given that the revenue will be used for game fish purposes. In view of the fact that the Ontario Federation of Anglers and other associations are now looking to the Government for some definite line of action on the game-fish issue, and the probability that in the near future the expenditure for this purpose will have to be greatly increased, the Committee is of the opinion that the rod license should be established, but not until the need of increased revenue to be applied to game-fish service shall have been dealt with.

In this connection, it may be of interest to point out that the angling or combined angling and hunting license applies to thirty-nine out of forty-eight of the United States: The minimum age limit at which applied varies from no limit to twenty-one years. Eleven of the States have no limit while nine specify sixteen years. The average fee is about $1.00.

SCIENTIFIC AND TECHNICAL ORGANIZATION

There is at the present time a very general recognition of the value of technical and scientific service and of the part which scientific investigation has come to play in relation to governmental, educational and industrial organization. For this reason, the possible relations to game-fish conservation should be thoroughly explored.

The situation in respect of game-fishes is only a phase of a more general fisheries situation and in a broad sense part of a very general issue concerning natural resources at large. It is a matter of finding out in what directions betterment may be effected by the further organization of service along technical lines and the articulation with this service wherever possible of externally available sources of scientific information, which latter may be expected to assist more directly in the solution of practical problems, or by analysis of basic factors furnish results accessory to that purpose.

So many interests are represented in technical and scientific research coming under the general head that it is worth while, especially at the present moment, to keep in mind that a large part of the obligation of natural resources research falls directly or indirectly upon the Government or other agencies lying for the most part outside of the industrial field. Industries and industrial concerns are sometimes in a position to organize and support their own research departments, and nowadays are generally speaking very much alive to the advantages to them of co-operative research subsidized in part by governmental or other agencies. They are chiefly interested, however, in that phase of the situation in which there is a more immediate prospect of utilization or commercial production. In this way, most perhaps of the really basic factors together with all protective, public and conservational issues naturally fall to the governmental side.

While no sharp lines of distinction can be drawn, experience throughout the world has shown that scientific investigation helpful to the fisheries may be profitably fostered by a variety of organized interests, including National and State Governments, Commissions, Fishery Boards, Surveys and by all laboratories of state and other universities conducting any type of aquatic research.

During the past thirty years, the need of scientific investigation as an adjunct of technical service and control in relation to game and fisheries in Ontario has been variously commented upon by individuals, associations and commissions. During the present enquiry, the matter has been constantly before the Committee, especially through the representations of the Federation of Anglers and the local associations. Unfortunately, perhaps, the impression has been created in some quarters that little or nothing in the way of scientific investigation is in progress, though, as a matter of fact, a good deal has already been accomplished. This impression is of no particular consequence in comparison with the assurance given that public sentiment will strongly support further organization of scientific and technical work.

With the object of calling attention to the various ways in which further organization of scientific and technical effort may be profitably carried out in the Province, it will be advisable to consider the various auspices under which such work is already being done, the applicability of each to the situation at hand, and the kind of co-operative effort that would likely prove useful. The various agencies are (1) the biological component of the Department of Game and Fisheries; (2) the Ontario Fisheries Research Laboratory, University of Toronto; (3) the Biological Board of Canada; (4) the newly organized Ontario Research Foundation; and (5) the National Research Council of Canada.

TECHNICAL SERVICE AS A COMPONENT OF THE DEPARTMENT OF GAME AND FISHERIES

In any plan which involves the technical service of the Department of Game and Fisheries on the fisheries side, it would appear to be necessary that the central element should be in the Department itself. In 1925, the Provincial Government made provision for the addition to the service staff of the Department of Game and Fisheries of a biologist who should be concerned principally with the conduct of fish cultural operations. Since then, substantial progress has been made, in part through the examination of the natural characteristics of the waters of the Province, and at least temporary employment of a considerable number of workers for the purpose.

Especially since there has been in Ontario no specific survey organization, and further no means of bringing together various kinds of scientific results of value to the departmental service, it may be presumed that the building of this biological component into a permanent central organization accessory to the more administrative work of the Department could profitably be carried out. The functions which such a division might naturally exercise would include at least some of the following:—

(*a*) The collection and tabulation of data referring to the natural characteristics of Ontario waters and their natural productivity from a game-fish or fishery standpoint.

(*b*) Investigation of changes natural or artificial, affecting fish life.

(*c*) Examination of the present suitability of waters for fish planting operations.

(*d*) Analysis of all available records concerning the relative success or failure of former plantings.

(*e*) Supervision and improvement of technical processes connected with hatchery operations, planting and transfers.

(*f*) Selection of personnel to be employed in further extension of technical service.

Further organization along such lines as here indicated would, of course, call for increased expenditure of money. But the introduction or development of a larger element of technically trained service should in the long run place the Department on a strong footing, and since we do not know at the present time just how the balance might turn in the next few years as regards supply and demand, or as between adequate conservation and depletion, there would at least be some tangible assurance that the situation was being handled in the right way.

As regards the development of a more scientific or technical component in the fisheries service, the difficulty has on several occasions been suggested to the Committee that the effort to introduce a scientific service into practical fish hatchery operations is likely to result in some sentiment of resentment on the part of practical hatchery men. It was possible, both in Ontario and elsewhere, to make some observations and enquiries on this point, and it appears that the sentiment is largely a carry over from former days. It rarely exists at the present time and need not exist at all provided the proper functions of the operative and scientific or technical services are understood.

Men who are concerned in various practical phases of hatchery operation, while they are not scientifically trained, are probably men who have either been brought up under the tutelage of older operators, or perhaps more usually at the present stage of hatchery development are themselves men of long experience, and probably also in most cases men who have a personal interest in the process which no prospect of mere employment for income gives. Furthermore, they are anxious about production, know their problems and difficulties and are keenly alive to the possible means of solution.

On the other hand, while it is proper to look forward to the time when everyone concerned with such operations should be adequately trained in a technical sense, the scientific or technical component at the present time must be recruited from younger graduates of the universities. Such men will not, by virtue of their training, have experience of hatchery and allied operations, but they will have a knowledge of basic factors which will enable them to ascertain cause and effect, to work out specific problems, and above all to ferret out points of weakness by the elimination of which the productive effect of the process can be improved. It is evident, therefore, that the principal business of fish culture is to maintain volume and routine in the process, which must be done by service operators. The scientific or technical function is mainly to investigate, effect, or suggest desirable improvements. The case is not on the whole different from what takes place in industry, namely, that the process and production must be operatively maintained, while improvements nowadays carried out in various ways by scientific helpers or research laboratories, are every now and then brought into the process.

The Ontario Fisheries Research Laboratory

For many years past, investigations dealing with problems of aquatic biology have been carried on in the laboratories of the Department of Biology of the University of Toronto. These investigations had reference only occasionally to conditions in the Province and came to be associated more closely with the operations of the Biological Board of Canada, including the Atlantic and Pacific investigations rather than those referring to Ontario. Some ten years ago, the need was experienced of a more immediate reference of the work of the Department of Biology to fishery problems in the Province and accordingly in 1921 the Fisheries Research Laboratory was organized within this Department for the purpose. The present status of this laboratory is briefly that it has a moderate degree of organization, has maintained annual field parties, has completed a number of investigations on Ontario lakes, and has published over thirty technical reports bearing upon aquatic conditions in the Province. While originally operated without special appropriations, the laboratory has recently through co-operation of the Provincial Government and the University authorities been placed upon a stable footing. As a component of an educational institution, it has an important position as a source of supply of scientifically trained young men.

Keeping in mind the somewhat different outlook of a university laboratory and the technical component of the Department of Game and Fisheries, they also have a great deal in common, and should on the investigative side be brought into co-operation.

The Biological Board of Canada

The Biological Board of Canada is a Dominion organization operating under the Department of Marine and Fisheries. It receives an annual appropriation and, subject to the approval by the Minister of the proposed plans of research and final accounting of its funds, has almost complete control of its expenditures and appropriations. It is composed of representatives of the universities, Government Fisheries Service and fishing industry, and it is organized to facilitate the solution of fishery problems by providing grants of money to assist researches, by providing laboratory accommodation on the Atlantic and Pacific coasts for marine investigations, by employing men to engage in major problems, both fresh water and marine, and by conducting practical experiments helpful to the fishing industry. The Board is not in any sense concerned with the training of men, nor with the provision of stipends to permit of younger workers to enter the field of fishery investigation, but its obviously close relation to the universities which constitute training centres, nevertheless gives it a very important position in that respect. This is especially true as regards the University of Toronto, where the Board has a winter laboratory operated in connection with the Department of Biology, maintaining very close relations and co-operating in the graduate work of the Department.

A particular feature of the organization of the Board is that, while a staff has been built up from year to year in connection with both immediately industrial and more scientific problems, the membership of the Board is maintained on a non-paid advisory basis.

The Biological Board is designed for service in any part of Canada, and has undertaken researches in all provinces. So far as Ontario is concerned, comparatively little has been done, but in all probability a great deal could be done with very little organization. It might be expected, for example, that the Biological Board would undertake work of a larger issue, useful alike to Ontario and other provinces, while the provincial agencies of one kind and another could be mainly directed towards problems of local geographical or environmental importance. The principal object would be served, however, by any kind of action that would bring the work of the Biological Board in closer relation to the scientific fishery work of the Province. For that reason, efforts should be put forth to organize fisheries research on this broader co-operative basis.

Co-operative Agencies for Provincial Fisheries Research

The successful development of the Biological Board of Canada naturally suggests the question as to whether a similar organization could be developed with especial reference to the Province of Ontario. In this connection, it may be pointed out that the Board has largely solved the problem of how to articulate scientific work especially of the universities with the Governement service and how to relieve the latter of maintaining within itself a scientific component only in part immediately connected with its fish cultural and similar operations. It has also established its composition and membership on an advisory and practically cost free basis, and has provided a normal mechanism of employment of young scientifically trained workers for the most part graduates of the universities.

In Ontario we have many elements which might be brought into similar co-operation including among the scientific laboratories or departments of universities, in the first place, those of Queen's University, McMaster University, the University of Western Ontario and the University of Toronto. An Advisory Board would naturally include representatives of these and of any other institution offering similar facilities, and also representatives of the provincial governments, including the fisheries technical service, and of the sportsmen of the Province, and since no practical distinction can be made between research applicable to game-fishes as opposed to commercial fisheries, of the fishing industry as well. The operation of such a Board would consist in defining problems and subsidizing as assisted researches work to be organized in university laboratories or employment of trained men for particular lines of economic work. It would require an annual appropriation of a few thousand dollars, none of which except for travelling and other incidental expenses should be used for payment of members of the Board. In the event that it were not found advisable to develop within the Department of Game and Fisheries a full programme of investigation such as outlined above, a larger element of survey and other investigation not so closely connected with the departmental service could be carried out under the auspices of the Board.

The Ontario Research Foundation

In how far the newly organized Ontario Research Foundation may participate in the solution of local fishery problems is as yet uncertain. It may be taken for granted that any problem connected with the fishing industry would naturally come under the purview of the Foundation, and the question therefore is whether any problem involving conservation, or not involving commercial production, or again referring to productive values only in a sense of increased tourist trade would be included in its scheme of investigation. In any case, the possible relation of the Foundation to game-fish and fishery research should be considered as a part of the present issue.

The National Research Council of Canada

The Research Council is yet another factor in the general situation. For some years past, the council has contributed greatly both to the development of economic research and to the training of young university graduates along fisheries and many other economic lines, providing for the latter stipends of different grades which assist them to undertake investigations and by this means provides a natural approach to employment in technical service. Since both the investigations carried out and the stipends provided for younger men are in accord with the normal work of the university laboratories and the class of investigation here under discussion, it is obvious that in any plan of provincial fisheries research a great deal of dependance can be placed upon the assistance and facilities afforded by the National Research Council.

Summary

As a result of a general survey of the situation the Committee believes that we have in Ontario a sufficient foundation upon which an adequate plan of game-fish and fishery investigation could be elaborated. The constructive factors concerned are:—

(1) The further development of the scientific and technical component of the Department of Game and Fisheries to cover at least the immediately practical requirements of the operative service.

(2) Utilization of the Fisheries Research Laboratory as a medium of aquatic investigation and the training of men.

(3) The development of a working arrangement with the Biological Board of Canada, by which division of lines of investigation as between the Board and local agencies may be effected.

(4) The possible development of a Provincial Board or Committee on the lines of the Biological Board of Canada, for the encouragement of fisheries research in the various Ontario universities, or other co-operating institutions.

(5) The reference of at least part of a plan of investigation to the Ontario Research Foundation.

(6) Utilization of the accessory financial assistance available through the National Research Council of Canada.

The Committee recommends the further consideration of these possibilities, to the end that conferences may be arranged which will result in a satisfactory working plan which can be developed in the next few years and cover the requirements of both game-fish and commercial fishery investigation.

REVENUE AND EXPENDITURE

The Committee has not examined into and does not express an opinion with reference to revenue and expenditure in connection with game-fish conservation except to call attention to certain phases of the matter which appear to be prominently in the public mind.

There is, for example, a widespread sentiment that the revenues derived from game and game-fish sources should not be regarded in any sense as a source of general, or what is ordinarily termed surplus revenue. This sentiment is doubtless based on the conviction that the stocks of wild animals are in a rather precarious condition, and very likely will be still more so with increase of tourist demand. For this reason, the revenue derived from them should be applied to protective, technical and fish cultural services, and should if anything be augmented from other sources. It is perhaps not so generally appreciated that the Province must make financial provision for a variety of other services which are not on a profit making basis and for which funds must be found.

Since also the appropriations for game and fishery service are doubtless made from year to year on a basis of gradual modification of the detail amounts available as revenue and disposable as expenditure, it is necessary to suggest at the present moment that a complete revision should now take place. The reason is that while the need of conservational work has been gradually increasing, we have had in the past few years a very rapid acceleration of tourist movement and allied changes which has rather quickly made the situation more urgent and has further impressed the whole matter upon the public mind.

There is now valid ground for urging that the expenditures on protective, technical, fish-cultural and other activities of a similar nature for which the Department of Game and Fisheries is responsible should be very substantially increased. And to this may be added the suggestion that it would contribute greatly to public confidence if such sources of revenue as become available from game and game-fish could be shown to have been re-applied to them, and if in general the Department could be put into such balanced position that it could be regarded as assigning its expenditure on the basis of its income, in other words, of simply paying its own way.

THE SITUATION AS REGARDS INDIVIDUAL SPECIES OF GAME AND SEMI-GAME-FISHES

1.—The Speckled Trout

This species has a most varied distribution in Ontario. It is a native species, representing in general a more northern type of habitat and a reproductive cycle quite different from that of the bass, pickerel and other spring spawning fishes. In waters where it occurs naturally, except those also occupied by rainbow or brown trout, it is the dominant game-fish, though often greatly reduced in size and numbers. It was probably in the beginning more widely distributed than it now is, having been displaced by bass or other fishes of a southern stamp. In some sections of the Province, it has probably been excluded by the development of muskeg such as it characteristic of much of the pre-Cambrian shield. Before the advent of agricultural and industrial development, the southern part of Ontario was one of the principal homes of this fish, but conditions became changed to such an extent by modification of the waters and other causes that this is no longer the case.

Throughout the northwest section of the Province, the trout problem is largely one of counteracting depletion in waters becoming more easily accessible, or damaged by local industrial development in areas which are of great importance from the point of view of tourist trade. In southern Ontario, on the other hand, it is largely a matter of salvaging a remnant of natural waters in which trout still occur, and of developing a plan by which trout fishing may in a few years be re-established. It may be remarked that there is, in the northweastern section of the Province, an area in relation to the Ottawa drainage, which has not been considered in the course of the present investigation but which may now, or in the near future, require attention, while northwards on the James Bay slope there have been complaints of depletion of trout owing to power dam construction.

The most outstanding features of the trout situation in the Province refer to:—

(*a*) The question of the suitability of the present hatcheries for the propagation of trout and the problem of new hatchery sites.

(*b*) The provision of rearing ponds to permit of planting at a more advanced age.

(*c*) The feeding of trout.

(*d*) The re-establishment of speckled trout in southern Ontario.

(*e*) The question of trout transfers.

(*a*) *Hatcheries*

Apart from the Normandale and Mount Pleasant establishments, facilities for trout hatching in Ontario are provided only by the group of lake hatcheries used for the most part for the hatching of commercial fishes. The only facilities presented by these hatcheries, some five of which are currently used in part for speckled trout, are represented by their equipment of trays and troughs in which either lake trout or speckled trout may be handled. They have no rearing ponds, and moreover little development of such ponds may be excepted because of limitations of space and water supply necessary for the purpose. These hatcheries are in general useful only to the extent that they can be made to produce fry in large numbers, which, under present conditions, have to be planted at a fairly early age. Normandale Creek and Mount Pleasant, on the other hand, have moderate facilities both for hatching and retaining trout through the fingerling stage, as well as accommodation for adult fish. Normandale Creek especially in the last few years has been developed as a combined establishment for retaining adult trout for spawning purposes, and for growing fry to the old fingerling stage. Recently, a building has been provided for hatching eggs through to the eyed stage.

Propagatory work on speckled trout has been in progress in the Province since 1868 or previously. Until 1913, when the Dominion Government withdrew from game-fish work in the Province, the annual distribution of speckled trout to the waters of the Province had not reached significant proportions, the number for that year being 261,700. Under subsequent operations by the Province, the output showed no great increase or stability until 1921, since when, with the exception of the off year, 1925, the number distributed has varied roughly between one and two millions. The production of former years was listed as fry and fingerlings, but doubtless consisted mainly of fry. The present practice is not only in the direction of producing fingerlings, but also of listing the various sizes according to a convenient method of classification, and the Committee understands that the plans of the Department call for substantial numerical increase. The chief consideration now is what extensions are necessary in order to put the production of late or older fingerlings on an improved basis.

The position of the hatchery system as regards ability to produce speckled trout may be summed up as follows:—

(1) With the exception of Normandale Creek and Mount Plesasant, the hatcheries are not on the whole adapted for speckled trout, and would be better employed with commercial fish hatching.

(2) The production of old fingerlings or young fish is now an established practice, reliance being placed upon older fingerlings because of the presumably greater chance of survival, while the advisability as to early fry planting is in doubt. The production of fingerlings was mentioned in the Annual Report of the Department for 1918 as highly desirable, and the report further indicates that in the hatchery system as operated in Ontario at that time, there was no provision for fingerling production. With the exception of the Normandale Creek and Mount Pleasant plants, created or modified for the purpose, the situation still holds. It is mainly the lack of controlled rearing ponds, various deficiencies and risks of water supply, and to some extent the lakeshore positions of our general run of hatcheries, which indicates the advisability of seeking better facilities for handling speckled trout elsewhere.

(3) Mount Pleasant and Normandale Creek have some advantages and also some disadvantages. The advantages are comprised in the possibility of maintaining open stream runs for trout, pond storage for adult trout, and a runway for sorting. The disadvantages consist of lack of control of headwater supply and prospective volume for future development, and further that if the Mount Pleasant ponds are used for bass, the outdoor accommodation for trout is limited to a stream of no more significance than any good stream or ditch of spring water origin.

(4) It would probably be advisable to develop Normandale Creek for trout and use the Mount Pleasant ponds exclusively for bass, thus avoiding the confusion both of mixture of operative methods and physical changes concerned, as well as the possible division of interest that may arise from handling bass and trout together.

(5) Although no computation can be made of the number of older fingerlings or young fish that the Province ought to grow and distribute, it is at least clear that the production of various States is very much greater than that of Ontario, even leaving out of account the practice of distributing fingerlings or young fish as opposed to fry. These States have individually a very much smaller area, but a more advanced demand from sportsmen for supplies of trout. It would be reasonable to suggest that with the gradual elaboration of a plan or policy for re-establishing speckled trout throughout the Province, an annual distribution of five millions would probably constitute the minimum which we should expect.

(6) In view of the requirement of rearing ponds, and the proposed restriction of the general run of Ontario hatcheries to commercial fish lines (including, for the present, lake trout as well as pickerel), it would be advisable to seek new inland sites for trout hatcheries. Two such sites (in addition to Normandale) would probably be a minimum number for present development in southern Ontario, while a special study of the requirements centering on North Bay, Sault Ste. Marie, Port Arthur, and Fort William should be made to determine the possibilities in the north and west sections of the Province. In the selection of sites absolute control of headwater spring sources should be considered as a first essential.

(*b*) REARING PONDS

The development of rearing ponds in Ontario will doubtless take place along the lines prescribed by practice elsewhere. These ponds are compartmented enclosures, usually in sequence or batteries along a running spring water supply, with a proper gradient to ensure volume of flow and circulation. In the selection of new hatchery sites, the suitability of the terrain for rearing pond construction is probably more important than suitability for hatchery building construction and indoor water supply. At the present time, the most desirable ponds, both from the standpoint of economy of layout and perfect control of the fish, are of cement construction. These are naturally also the most expensive as regards constructional cost. Various less expensive kinds of ponds may be used as occasion requires, but they cannot be represented as being so completely satisfactory because not so well adapted for cleaning, grading, control of disease and other operations necessary for trout culture.

Each new inland hatchery site selected should be chosen with reference to the construction of rearing ponds and the demands of future extension of operations. The advisability is likewise indicated of obtaining more ground area than is immediately necessary, both as regards neighbouring sources of spring water supply and as regards land lying below the plant, along the natural course of the stream valley.

It may be added that the utilization of all possible sites or stream runs on Government controlled property will be advisable for the purpose of increasing the total water area available to the Department for rearing trout fingerlings to a later stage.

(*c*) *The Feeding of Trout*

Under conditions now existing in trout culture, especially as regards the growing of fish through the fingerling stage and possibly to yearling or adult stages, food supply becomes a far more important problem than in the case of young fry. In the various States visited by the Committee, it was made clear that the problem of obtaining safe and dependable sources of good material is one of the most important phases of trout culture at the present time. This is because reliance has been mainly placed upon liver obtained from stockyards, the use of which is now becoming impracticable because of greatly increased cost. Various experiments are therefore in progress which have to do either with substitutive foods or the evaluation of the nutritional elements present in ration combinations. In all this experimentation, there is naturally an element of convenience or availability upon which the continuance or success of rearing trout as a practical proposition will likely depend. In Ontario, no particular attention has as yet been given to this problem. In advocating, therefore, the rearing of trout, it is advisable to point out that before very long the entire situation relative to the supply of food for trout in rearing and retaining ponds in this Province will require thorough investigation.

(*d*) *The Re-establishment of Speckled Trout in Southern Ontario*

A particular phase of the trout problem is presented by that section of the Province in which, because of long standing agricultural and other industrial development, there is, in addition to depletion, a very great deal of modification of the streams themselves. Generally speaking, southern Ontario has streams which, under the original forested conditions with spring sources or similar cool, clear water, must have been streams pre-eminently suitable and populated by speckled trout. There are still remnants of such waters which afford to a few individuals each year trout fishing of a moderate order.

The re-development in southern Ontario of good trout fishing would be a boon to local sportsmen, some of whom cannot fish otherwise. This would also be in the interest of maintaining the species by the encouragement given to cultural operations.

There are still streams which with adequate protection of headwaters could be made more productive than they are now, and there are streams which with some reconstruction could be replenished. There are doubtless streams and rivers that can never be made to serve again as breeding or fishing ground for speckled trout, but which are perhaps adapted to substitutive species, trout or otherwise.

The co-operation of individuals and local associations, and even of private clubs, could be invited in order to further this work. Ultimately there would be established throughout southern Ontario a definite demand for supplies of fish for stocking public waters which the hatchery service, through its rearing and retaining ponds, would be able to fill. This would doubtless result in the development of sentiment favourable to trout culture in the Province, which would be comparable to that observed elsewhere, and which would be reflected in a closer working relation between sportsmen and the Government service.

A necessary preliminary to this work of rehabilitation would be a detailed systematic survey of inland waters by streams or watersheds which would bring together all the necessary information upon which a general plan of trout propagation and eventually of improved public fishing could be founded.

Some work of a survey type has already been done under the auspices of the Department in relation to the Thames watershed.

(*e*) *Transfer of Trout*

In trout work, transfer from one region to another even across continent or across the ocean has been generally practised. Some transfers, either to waters previously containing the species, or new waters, have been successful, others not. The eggs, usually transferred in the eyed state to a hatchery in the region to be planted, will produce fish which when planted in local waters may not be able to establish themselves, though the success in trout cultural work indicates that the young have a high degree of adaptability.

In Ontario the chief transfers are likely to be between southern Ontario, where there is now breeding stock, and northwestern Ontario, which possesses available supplies of the famous Nipigon trout.

It is probable that these transfers are neither harmful to trout nor result in undue effort on the part of the young fish to hold their own under new conditions. On the other hand, it would appear that the indiscriminate shipment from one place to another has in it an element of risk, and since in Ontario it should be the case that local supplies are available either in the northwestern or southern parts of the Province, it would be better to rely upon the general principle that locally produced fish would be the more desirable for stocking local waters. Such fish presumably have the advantage of hereditary tendencies applicable to the particular waters from which the parent stock is derived.

2.—Brown and Rainbow Trout

As indicated elsewhere in this report, it is important that we should have in Ontario a definite policy or line of action respecting the cultivation of native or introduced species. Whatever is done in this respect should be publicly advertised so that more especially the sportsmen of the Province would know exactly what is being attempted.

As regards the native species, i.e., the speckled trout, there is no question as to the advisability of keeping the species in a more or less central position, from the point of view of preference, maintenance of supply, or re-establishment. In many parts of the Province, the speckled trout may disappear by virtue either of water change or through the increasing dominance of competitive species, but the desirability still stands of doing everything possible to assist the native species in maintaining its position.

European brown trout, including therewith the sometimes favoured Loch Leven variety, were introduced many years ago into the United States and have been extensively propagated by artificial means annd introduced into various waters. They have been relied upon for the most part to adapt themselves to parts of streams, more especially lower water reaches, which have become modified as a result of deforestation and other processes generally detrimental to speckled trout. They are credited with the ability to live under conditions of somewhat warmer, exposed, sedimented or even slightly polluted water, which would be fatal to speckled trout, waters also in which attempts to re-establish speckled trout have failed. They are trout which are capable of growing to a very large size, and while their introduction has been looked upon with some favour, there is a great deal of apprehension as to the possible crowding out of the native species.

There have been public and private plantings of brown trout in Ontario, and apparently in one instance migration of brown trout from United States plantings. This migration took place from a Michigan planting on the St. Mary's River. Private planting in the vicinity of Owen Sound some years ago resulted in accidental stocking of Sydenham River. Brown trout of a weight of seven to eight and in one instance twenty-five pounds have subsequently been taken in this river. Public plantings were made in 1913-15 and 1918 in certain streams of Perth, Waterloo, Brant and Norfolk Counties as well as in a pond at Glencoe, Middlesex, and the Department has now at Mount Pleasant considerable parent stock of the Loch Leven variety.

In view of the fact that brown trout have already made their appearance in the Province, it is possible that considerable stocking might take place by migration to or from waters in which they are able to grow successfully. But it would be well to bear in mind that in various ways opinion as to desirability or undesirability of brown trout is very much divided and that in the northwestern section of the Province, so far as the Committee has been able to ascertain, brown trout are definitely not wanted.

A particular feature of the situation is presented in southern Ontario, a part of the Province which, it may be presumed, would be more likely under consideration for brown trout. This feature refers to the advisability of first determining the situation as regards the native species since the possible extensions and limitations of the speckled trout have not yet been fully investigated. In some neighbouring United States in which trout are being propagated and distributed, there was formerly the same situation, which has now been corrected to a considerable extent by investigation of speckled trout possibilities under environmental conditions now existing. Such investigation is, of course, fundamental to the issue. Apparently, therefore, all that can be said about the brown or Loch Leven trout in Ontario is, first, that further development of these trout may be looked upon with some doubt; second, that it would be well to determine more definitely for southern Ontario the extent to which speckled trout may be protected or re-established before going too far in introducing substitutes.

Rainbow trout are in many ways in a different position, though the same general questions arise with reference to the desirability of first deciding upon an operative policy to be employed for the native species.

What is popularly known as a "rainbow" trout is apparently not a single species, the term representing either a confusion of two or more original species or varieties or designating hybridized derivatives which have come about by artificial culture. The original species are black-spotted trout belonging to the Pacific slope.

The original transfer of "rainbows" to eastern points took place many years ago, the stock being obtained from the McLoud River, a tributary of the Sacramento, California. This stock consisted of inland stream trout of a type now designated as *Salmo shasta*, and was the parent stock of the trout extensively bred and distributed as "rainbows" in the east. The eastern stock, however, was supplemented by fish from the Klamath River and from Colorado and Nevada, including for the most part, if not wholly, inland stream trout to which the term "rainbow" might be properly extended, even if not of exactly the same racial type.

A most important transfer eastward, however, especially in so far as Ontario is concerned, was that of the steelhead trout, *Salmo gairderi*. This is a coastal river type of the Pacific slope which has the habit of running into salt water and re-ascending the streams to spawn. So far as can be ascertained, the so-called "rainbows" of the St. Mary's River and Lake Superior are steelheads, derived from planting on the Michigan side of the river, and now extending eastward along the North channel and northwestward along the Superior shore. The steelhead apparently assumes readily a land locked or exclusively fresh-water habit, but when free to migrate remains only for a part of its life in streams and as it increases in size moves into open water, re-ascending streams to spawn. It is rather an interesting coincidence that along the Superior shore, where speckled trout had already found conditions suitable for an open water or "coaster" habit, members of an introduced species, having by their original nature that habit, have been able to make use of it to good advantage for comparatively rapid distribution.

Happily the accidental introduction and spread of the steelhead has given rise to no dissatisfaction. It is a splendid game-fish and is thoroughly appreciated where it occurs. There is some doubt whether it interferes in any way with the speckled trout, but apparently there is no serious competition. The Associations at the head of the Lakes have specifically asked that consideration should be given to the planting of rainbows (steelheads) in that region.

In Southern Ontario, authentic information concerning rainbow distribution is difficult to obtain, but it may be presumed that the distribution is not extensive. There was apparently an old planting in the Pine River, the original stock of which is unknown, and there were also plantings in the Sydenham River. There is some reason for believing that rainbows from these or some other plantings have migrated along the shore of Nottawasaga bay, including the east side of the Bruce Peninsula, and that there are some fish along the west or Lake Huron side of the peninsula. The Department of Game and Fisheries made plantings in 1918 and 1922-26 at certain points in Simcoe, Grey, Bruce and Victoria Counties and in Parry Sound, Nipissing, Sudbury and Thunder Bay districts. The Department has also a small stock under control at Normandale Creek which is of Sault Ste. Marie steelhead origin.

The rainbow trout, allowing for some uncertainty as to the nature of the original stock, has been generally credited with ability to live in warmer or modified waters and its desirability has been discussed in the same way as for brown trout, from the point of view of replacing speckled trout in such waters.

These former ideas, at least as regards the temperature conditions, were found to be erroneous. Both the original stream living McCloud trout and also the steelhead require cold waters. The probability is, therefore, that whatever advantage may be expected of the introduction or distribution of the rainbow and steelhead in southern Ontario would come from the tendency of the older fish to seek the mouth of streams. It may be expected that if the fish thrive in such situations, it will be because the water remains cool, large in volume, or rapid in flow. As to whether a purely stream rainbow can or should be developed in Ontario is a matter upon which no information is available, it being presumed that such rainbows would inhabit waters but little different from those forming the natural habit of native speckled trout. Therefore, before utilizing the rainbow trout we should first determine the possibilities of re-establishing the native species; and second, we should trace the source and nature of the rainbow stock which it is proposed to use for the purpose.

3. The Black Bass

There are two species of black bass commonly distributed throughout the Province, namely, the lare-mouthed black bass, which inhabits waters in which vegetation is generally abundant, and the small-mounted black bass, which prefers clean, open water, living usually in the vicinity of rocky shoals. The two species have a common distribution to the extent that they occur in different parts of the same water in accordance with the physical features cited, and there are many smaller lakes, especially throughout the north country, in which one species or the other occurs alone.

At the present time in Ontario the species most generally under discussion is the small-mouthed bass. This has rather led to the conclusion that the large-mouthed bass is unimportant, which is far from being the case. And since in the subsequent part of this report, except as otherwise stated, the fish considered is the small-mouthed bass, it may be pointed out that with few exceptions the questions raised as to culture and re-stocking refer equally to the large-mouthed species, differences of requirement as to control being mainly along the lines of differences in natural habit.

There are already two areas reported in which re-stocking with large-mouthed bass is necessary. One of these is the Rideau system and the other is the Niagara peninsula, including especially Hamilton bay. It is probable that there are many areas throughout the Province, which, either now or in the near future, should be re-stocked with this species, these areas being in general ones in which fishing stock is desired and in which, because of the nature of the water, original or modified, small-mouthed bass are not likely to thrive. For this reason, it will be advisable to make whatever provision is necessary for transfers of adult fish and for pond hatching operations applying to the large-mouthed bass, to be carried out in the same way as for the small-mouthed bass, though on a smaller scale.

The importance of the bass as an angling fish is widely recognized. It is probable, if the facts were known, that the abundance of this famous fighting fish throughout the Province, and especially northwards, is the principal basis of the reputation which the Province enjoys for game-fishing, and one of the chief factors in the increase of the tourist trade. There are waters in the Province that have become famous for trout and for maskinonge, but from the wide distribution of the species it is probable that sportsmen far and near know Ontario mainly for its black bass.

Depletion of the bass in Ontario waters has been commonly discussed during the course of this investigation. This discussion, though qualified in many cases by reports of fair fishing or even of plentitude, indicates that throughout the Province, more especially with the rapid increase of tourist movement in recent years, a good deal of anxiety is being felt as to whether the bass fishing will hold out. It is, therefore, important that the situation should be examined from every angle and that no effort should be spared to maintain what is obviously one of the great sources of enjoyment to our own people and also a very important source of revenue to them through the tourist trade.

As observed in a previous section, it would doubtless be found that there is a relation between the size and numbers of bass now indicated in certain waters, and the amount of fishing which has taken place in them through possibly a long period of years. Taking the range of bass waters in Ontario, some were described years ago as already depleted. Others that appear to be approaching depletion now, have been fished for a long time by small numbers of individuals. Others again have been fished intensively by relatively large numbers of people, but only in the last few years. Presumably many of our isolated lakes have been fished to so small an extent in past years that they still contain bass in abundance.

The whole bass problem may, however, be considered as one issue, because it may be presumed that every water, if not now, will soon be accessible to tourists in large numbers, so that the success of protection and re-stocking will likely be assured only to the extent that we are able to foresee and meet the requirement.

There are certain facts and evidences concerning the bass which have an important bearing upon propagation and re-stocking. These have to do with the real causes underlying depletion in its more recent stages. The falling off of bass fishing in many parts of the country, the fish becoming scarce or those taken being obviously immature, has been variously commented upon. Many possible reasons are being given, such as netting or poaching, poor seasons, change of water levels, taking the fish from the spawning nests and over-fishing by anglers. There is abundant evidence that while any one of these methods or conditions of taking fish may have contributed, angling alone is in the long run responsible. The recognition of this point is very significant as regards the re-establishment of the species in depleted waters.

The small-mouthed black bass in its native haunts is extremely localized. In lake waters it remains during the angling season around rocky shoals, where crayfish live under the stones, and where, in all probability, these crayfish occasionally become more or less dislodged by movements of the water so that the bass can get them. The bass also frequents shallow runways probably for the same reason. It is likely to be found at or near the mouths of small bays or indentations where there is vegetation and in most cases various kinds of minnows, some of which constitute the most favoured food.

The bass occasionally goes into deep water, but not to any great extent. It is extremely sensitive to temperature and is known to move from inshore positions when the water becomes very warm in the summer outward to the open shoals. The change does not involve any migration, but simply a minor difference in position. There is little tangible evidence as to whether the fish moves or migrates from one part of the shore to another, but it is more than probable that it does not, except within a very small range. River conditions are less open to observation on the point, but here again, especially in smaller rivers and streams, the bass will be found largely in certain positions, more especially at the foot of water falls or rapids.

A point to emphasize is therefore that the bass lives at, and does not move far from, the place where it is actually found.

It so happens that practically every angler who wants to fish for bass is similarly limited in position because he will be fishing either from the shore or from a small boat, and in lake waters can as a rule only fish those parts of the water which are not too greatly exposed to the open.

In a word, while the angler seeks the bass where he has reason to believe it will be found, his habits and limitations coincide almost exactly with the natural habits and limitations of the fish itself. Except for the fact, well known to sportsmen, that the bass is occasionally indifferent and declines to be tempted by any kind of bait and that protection is naturally afforded by a water medium, it may be said that the fish has in general no means of escape.

There is an old notion that angling alone will not bring about depletion. In earlier days when fish were abundant and anglers few, the impression might easily have become established that line fishing could make but a small inroad upon the supply. Under present conditions with increasing numbers of anglers and more persistent fishing, the situation appears in a different light. What is true of the game-fishes in general, in this respect is especially true of the bass.

No surprise need be felt that in tourist waters consistently fished, the bass fishing is going down. If, to the other influences making in one way or another for depletion, there is added the element of more or less continuous summer angling, the bass fishing is certain to deteriorate to the extent that it will soon be worthless. It is entirely probable that the bass is not now, and never has been, capable of maintaining itself under the strain of more than a very moderate amount of line fishing.

Bass fishermen everywhere comment upon the scarcity of fish in extensively fished waters. They often recall incidents of fast and furious fishing in smaller, remote inland lakes. They do not, as a rule, reflect that the existence of such good fishing means that the water had been relatively free from fishing and that the supply far from being permanently available could be almost completely wiped out by comparatively little intensive fishing. Such fishing would leave the lake not only in a condition of deficiency as regards fish of catchable size, but also the remaining fish would be immature and handicapped from the point of view of natural propagation.

The maintenance of a natural supply depends upon the fish being able to spawn naturally and upon the retention of suitable environmental conditions. Under natural conditions, the female bass is capable of producing many thousand eggs and the male fish carefully guards the hatch through the early fry stages. The existence of the ordinary risks and accidents known to occur everywhere in nature, results in a comparatively small percentage of the fry coming through to the stage when they are able to take care of themselves. This percentage is, however, large enough under absolutely original and natural conditions to maintain the species in abundance.

Under the artificial conditions brought about by angling, by various illegal methods of fishing, by modification of water levels, or using the water as a dumping place for waste, the outlook for natural reproduction is greatly altered. The bass is then subjected not only to all the older natural risks but to many new ones. One of the most serious conditions is brought about by the fact that the larger fish have been removed, the smaller and the younger left. These younger fish have to withstand the ravages of vigorous fish such as the pike or maskinonge which feed upon them. The females must at the spawning time produce all the eggs available, which will likely be in smaller numbers, and the males must tend the nests, which they will be less capable of doing because being immature they are more easily captured or chased off by enemies. In addition, general decrease in numbers greatly increases the risk that the fish will not successfully find mates. It is in all probability true that once the number of the larger fish decreases to a certain point, the process of depletion under open fishing proceeds at a greatly accelerated pace.

The conclusion to be drawn from the circumstances as here outlined is that, except for the intervention of control methods, the small-mouthed black bass is marked for early extinction. It is possible that in a few years in all accessible waters, and with greatly increased tourist demand, bass fishing may be a thing of the past. If, for the sake of our own sportsmen and vacationists, or in recognition of the enormous value to the Province of the tourist trade which is so largely connected with bass waters and bass fishing, we wish to prevent absolute depletion, it will be necessary to adopt vigorous measures and to add very substantially to what the Government service is already doing for the propagation and distribution of this fish. In carrying out this programme, not simply one method, but every method which is in accordance with the natural requirements of the fish, or which has been successfully used, should be applied.

The control methods now generally applied to the bass are as follows:

(*a*) Artificial or semi-natural propagation by the pond nesting process, followed by planting with advanced fingerling or young bass.

(*b*) Distribution of pond-grown older or adult bass.

(*c*) Distribution of wild bass from lakes or sanctuaries.

(*d*) Closure.

All these methods have been used to some extent in Ontario.

(*a*) Regarding artificial propagation, the fact is now generally known that in the case of the bass and other members of the family to which it belongs, the processes ordinarily used for trout, involving stripping and hatching of the eggs in trays, are not applicable. Bass are late spring-nesting species, which spawn intermittently, the female discharging the eggs a few at a time. The eggs become fertilized by the milt provided by the male and settle to the bottom in a nest or area previously prepared by the male and provided with clean pebble or weed to which the eggs adhere. The artificial process consists in the operation of special ponds for spawning and rearing. All the conditions are maintained as nearly like the natural conditions as possible. Artificial propagation on this basis is subject to many risks, any one of which may result in failure. On the other hand, the process is almost certain of success if all the factors are understood and can be brought under control. In general, the procedure has been under experimentation for many years, and has now become established practice.

Pond-nesting and other methods of handling bass have been in practice in this Province for upwards of thirty years. In view of certain comments which have been made in the course of this investigation as to the inability of the Province to hatch bass, or to the effect that pond hatching has been a failure, the situation with reference to propagation and restocking may be advantageously reviewed.

During the decade roughly between 1900 and 1910, both the Dominion Government and the Province were engaged in the transfer of adult bass for the restocking of Ontario waters. It was while this kind of restocking was in progress, and especially about 1906, that the work of the late Mr. Dwight Lydell, which has since become famous, on the propagation of bass by the pond-nesting method, began to be generally known. And it was at approximately the same time, or more exactly in 1908-1909, that the Province made the experiment of nesting bass in a pond near Brantford, and thus obtained the first fingerlings produced under semi-controlled conditions in Ontario. In 1909, 20,000 fingerlings were distributed. In successive years thereafter the Province built up one by one the series of bass ponds at Mount Pleasant, under the supervision of the late Mr. J. T. Edwards, with the result that by 1917, the number of bass fingerlings distributed was 735,000. In 1918, the bass were a total failure, but in the succeeding years, with one exception, the number grew again until in 1923, 785,000 fingerling bass were sent out from the Mount Pleasant hatchery. The figures given in recent reports indicate that in 1925 the bass were again a total failure, and since that time the number produced as fingerlings has been insignificant, there being 12,500 for 1926 and 5,475 for 1927.

The interpretation to be placed upon the small numbers produced in the last three years will be noted later, but the results of the Mount Pleasant ponds up to 1923 demonstrate a fact that from the present point of view is of great importance. It has been demonstrated that in Southern Ontario wild bass can be successfully nested, eggs hatched, and fingerlings distributed in large numbers. It has not been demonstrated that bass can be propagated under semi-controlled conditions in parts of the Province climatically different or with different conditions imposed by the nature of the terrain as regard construction of ponds or maintenance of suitable water supply, the fact of bass living and naturally spawning in other parts of the Province being of itself no guarantee that propagatory work will succeed.

The success of this development at Mount Pleasant is significant because it established for Ontario a line of practice commonly adopted elsewhere. In the various states visited by the Committee the pond-nesting process was represented as, and shown in operation to be, the method generally relied upon at the present day. The conversations which the Committee had with several gentlemen immediately connected with the work indicated, first, that the process is being gradually improved and that much dependence is being placed upon it as a means of obtaining young fish in large numbers for restocking purposes. This applies, of course, to the production of fingerling bass of perhaps up to two inches in length. The production of larger fingerlings, of four or five inches, or older fish and the process of distributing and planting constitute different phases of the matter.

As regards the recent failure of the Province to produce bass in considerable numbers by the pond method, there appear to have been several factors concerned. For example, the general success of the proposition in years gone by seems to have been owing to the energy and enthusiasm of the late Mr. Edwards and the fact that the Department provided him with the necessary facilities and construction to carry operations through from the experimental to the production stage. The fact that the bass propagation for 1925 was a complete failure has not been explained, but it is significant that in comparison with a distribution of 785,000 in 1923, there was already a falling off to the extent of more than one-half, namely, 338,000, in 1924. It is likewise significant that in addition to the year 1925 certain preceding years, 1918, and also 1907 (adults), were also failures as regards bass distribution. These figures and dates suggest climatic cycles, and since bass are known to be extremely sensitive to temperature, it is possible that periods of low temperature were accountable for the failures indicated in these years as mentioned specifically in the Departmental report for 1918 in part, because of the inability of the hatchery officers to bring the deciding factors under control. So that while it has been represented to the Committee by experts that there is no reason why bass hatching should not be successful under conditions of pond control, the emphasis has naturally to be placed on the extent to which control, either of temperature or other factors, was or can be made practicable.

It may be noted further that the Mount Pleasant site appears to have been relied upon to some extent for the outdoor accommodation of trout and that in the last three years the Department has been heavily engaged in the management of the hatcheries turned over to it by the Dominion in addition to the already existing Provincial establishments.

On the whole, the conditions which have obtained during the last few years have not been conducive to the expansion of bass propagation.

While in the opinion of some the Province appears to be at the present time in a very uncertain position with reference to bass propagation by the pond-nesting process, the fact that the Mount Pleasant ponds were brought in 1923 to a high state of productivity indicates that there is nothing to be feared in the way of further advancement. Furthermore, the fact that the pond-nesting method is now an established practice everywhere indicates that success is to be looked for along these lines. It is obvious, however, that a production even to the extent attained in 1923, namely, 785,000, represents a very small number for the entire Province. In view of the great area to be served, the close relation between the bass fishing and the tourist trade and the value likely to accrue from the maintenance of good fishing, the number of bass produced should be greatly increased. While no accurate computation can be made, a production or distribution of between two and one-half and three millions would, in all probability, be nearer the mark.

In looking forward to increased production, it would appear that a minimum number of sets of ponds, each set consisting of six or eight, would be three for small mouthed black bass and one for large mouthed black bass. The propagation of large mouthed bass should, in all probability, centre in the eastern portion of the Province. The propagation of small mouthed bass is now provided for at Mount Pleasant in the southwestern part of the Province, so that the indications would be for development eastward, perhaps at Glenora, in relation to the Trent system, and south and east of it, while a third development should take place in relation to Georgian Bay, and related districts. This computation leaves out of consideration the very important bass waters and tourist fishing waters of the more northerly part of the Province, concerning which we have not at present the necessary information as to the practicability of propagatory work by the pond method.

The selection of sites for bass ponds should be determined on the basis of suitable water supply, which probably need not be of spring source if the headwater is free from pollution and can be kept so. Bass pond sites may be developed in conjunction with trout sites, but in this case all ponds and operations connected with one species should be kept separate from those applying to the other, for the purpose of more direct control of the factors pertaining to each. Such economy of operation as might be obtained in this way would necessitate that the interests of both species were being adequately looked after. Pond culture of bass has been generally recognized as a process requiring very close observation and control, while the rearing of trout through to the advanced fingerling or young fish stage is likely to engage all the effort that a hatchery staff is able to give.

As regards the growth of black bass up to the time of planting, practice now favours the retention of the fish to the most advanced stage possible, the planting of fry being largely discredited. Providing that eggs can be hatched in large numbers, it will be readily seen that planting fry in a very early stage makes it possible to distribute fish in large numbers at small expense, but nothing would be gained by a process which might result in death of the fry. On the other hand, the effort to raise the fish to a length of let us say four inches, which is within the range of possibility in one season, counting on fall distribution, calls for a great amount of attention, chiefly in the direction of protecting the fry from the parent fish, in effective feeding for the most part with natural food and in preventing overcrowding and cannibalism. The whole process, therefore, must be kept under careful supervision during the entire summer season when the young bass are growing, but in all probability the retention of the young fish to this later stage is well worth while in order to better ensure success in restocking operations.

(*b*) It has been shown to be possible to rear black bass to the adult stage completely under control conditions, but the feeding of the young fish at three or four inches or after they are beyond the small food stage, and until adult, constitutes a special phase of the food problem. Since no form of prepared food has been found to be completely satisfactory, minnows, wild or cultivated, must be supplied. The difficulty of feeding bass at this older stage will, on account of the difficulty of supplying food, tend to limit adult bass retention to stock necessary for breeding. In restocking with adults, it is probable that in this Province supplies of wild fish will continue to be relied upon and to be generally if not permanently available.

(*c*) From all the evidence available, the transfer of adult bass for general restocking and especially to provide breeding stock in other waters, appears to have been in many cases successful. For this reason, the utilization of any source of wild bass, for restocking waters that are being depleted, is worth considering from all points of view. Any kind of public sanctuary or closed water which the Department may have at its disposal will not only be of value, but dependence in years to come may have to be placed upon supplies of adult bass being available in Government-owned preserves. At the present time, the Department has under closure a small number of lakes but there are throughout the Province hundreds of small lakes which either have plenty of bass in them now, or could be made to contain large supplies under conditions of closure. In many cases, the natural hatchings in these lakes could be used for the supply of fry, which, if taken early, could be obtained in fair numbers and reared in ponds, though probably not in such numbers or good condition as could be obtained by careful use of nesting ponds. In view of the probability that in a few years at least all such lakes now available to the public will be fished out, it would be advisable to bring under reservation or closure a very considerable number, selecting for the purpose, as far as possible, those that can be reserved without requiring personal supervision by Government officers.

(*d*) Closure.—The results of restocking operations for bass in Ontario, so far as the Committee can ascertain, have almost always been rendered questionable because of the retention of open fishing. Waters in which fishing has gone down commonly show large numbers of very young fish. To the numbers of these young fish there have been added by planting numbers of fingerlings. The line of reasoning seems to have been that if young fish are added to young fish the result will be fish that are large enough to catch.

As far back as 1906, the late Mr. J. H. Willmott, Game and Fishery Warden, of Beaumaris, Ontario, called attention to the futility of planting bass in Muskoka Lake under conditions of open fishing. Muskoka Lake was at that time already far along in tourist utilization and bass depletion. So far as the Committee has been able to ascertain, nothing in particular happened as a result of restocking operations with fingerling bass. In all probability what the waters needed was not so much increased numbers of fish, but an opportunity provided so that the fish already there could grow.

While open to some difference of interpretation, the case of Long Lake, District of Kenora, is an important one to be considered in this connection. In 1901, and for several years thereafter, the Department of Game and Fisheries transferred considerable numbers of adult bass mainly for stocking or restocking smaller lakes. In 1903 over 400 bass were shipped to Long Lake in the vicinity of the Lake of the Woods. Mr. Drewry, of Kenora, informed the Committee that on that occasion after a good deal of difficulty 274 bass, some of over two pounds, but for the most part of about half a pound in weight, were successfully liberated in Long Lake. A dam was placed at the outlet preventing the fish from descending to the Lake of the Woods. Long Lake was closed for five years. Immediately after it was opened to fishing, the dam was destroyed by fire and the bass were then free to move into the Lake of the Woods. The latter was not primarily a bass lake, but at the present time, apart from overfishing, is well stocked in its northern portion, not infrequently yielding fish of three pounds in weight.

The indications are that closure combined with restocking either with young or adult bass will prove to be the solution of the bass problem. Indeed, from a practical point of view, it would appear that unless some method, satisfactory and agreed upon by groups of local residents, summer or permanent, is adopted to reserve certain waters or parts of waters so that either the native or introduced fish are permitted to have a few years of uninterrupted growth, there will be little likelihood that fingerling production in ponds or transfer from sanctuaries will be of sufficient effect to justify the expense involved.

Summarized, the solution of the bass problem in Ontario appears to be: (1) Improve the arrangements for obtaining young bass from the Mount Pleasant ponds; (2) Add new sets of ponds, two for small-mouthed and one for large-mouthed bass at suitable places so as to reach easily the most depleted waters; (3) Develop storage or retaining ponds only if wanted for supply of parent bass; (4) Establish sanctuaries for supply of adult bass for transfers, at first not to provide fishing in the waters restocked, but to replenish the supply of well-grown parent stock. Encourage individuals or associations to do the same, the Department obtaining the closures; (5) Effect closures where possible to permit the bass to grow to reproductive maturity and acceptable size. In view of the very great differences existing as regards the extent of bass depletion in the Province, any plan of systematic restocking should be made to apply in the first instance to those waters which for a long time past have been subject to continuous drafts upon the bass supply. The most critical areas in the Province include parts of the Trent and Rideau systems together with many geographically associated waters in the south and eastern portions of the Province, Georgian Bay, Lake Simcoe and the Muskoka Lakes.

Legal Restrictions as Applied to Bass

There has been some discussion regarding the minimum size and number of bass permitted to be taken, and whether or not it would be advisable to prescribe the first six fish captured as the number to be taken, regardless of size. The object of this suggestion is to avoid injury to the fish resulting from careless handling or dragging the fish through the water. In all probability the taking of the first six fish, irrespective of size, would be beneficial, but a regulation to this effect would be extremely difficult to impose with any likelihood of success. It would appear to be more worthy of consideration that an effort should be made to instruct sportsmen in the handling of fish, with the object of avoiding injury. It should be borne in mind that the surface of the fish, however hard to the touch, is covered by an extremely delicate membrane, the destruction of which, even by slight contact with a dry hand, gives rise to surface abrasion which is likely to be followed by an attack of fungus resulting perhaps some days afterwards in death. By minimizing such contacts or any kind of rough handling and taking the fish on light tackle, the undersized ones can be returned to the water alive and uninjured as the regulations require.

Close Season.—In the course of this investigation, the regulation covering the close season for bass has given rise to various comments, and considerable dissatisfaction has been expressed regarding it. The difficulty arises (*a*) from the present setting of the first day of open season, except in the St. Lawrence River and Ottawa River, on July 1 instead of June 16 as was formerly the case; (*b*) from the setting of the beginning of the open season to coincide with the beginning of open season for maskinonge; and (*c*) from the setting of the beginning of close season for both bass and maskinonge on October 1 instead of later.

The discussion on these points as regards the bass centred on the fact that in the Kawartha Lakes the cutting off of the last two weeks in June, prevented game-fishing of any kind, the maskinonge season having been similarly curtailed. It was claimed that the lack of game-fishing resulted in great loss of tourist trade. Second, no reason could be seen for placing the beginning of open season so late as July 1 because the spawning of the bass was understood to be well over at that time.

Dissatisfaction with the closing on October 1 largely came from the region of the Rideau and Trent systems, where there is a desire to maintain October fishing for such tourists as are in the habit of taking vacations only during that month.

Regarding this situation, it may be first pointed out that the open season for bass formerly began on June 16 throughout the Province, and it was in response to representations that the spawning period was not over at this time in certain parts of the Province that the regulation was changed to read July 1. except in the Ottawa and St. Lawrence Rivers.

There are three factors involved in the case: (1) Difference in time of spawning owing to geographical position and climatic conditions; (2) whether the total number of fishing days should be reduced; and (3) whether fishing for bass and maskinonge should begin on the same date.

As regards the general understanding of these points, it should be made clear that in so far as natural spawning times are concerned the important consideration is the average period each year during which spawning takes place. A good deal of confusion has come into this issue because of conditions which although exceptional are often taken as usual or typical. For example, bass are observed spawning very late in the summer, and it is not unusual to find female bass in the late summer which apparently have not spawned. The experience of such fish being taken confuses the popular estimation of time or duration of the spawning period, and thereby creates a situation which should not enter into the question. It will doubtless be found to be the case that in some seasons spawning is early, in others late, that individual fish will show wide departures from the average and that some females containing large eggs are in reality parasitized fish which are prevented from spawning by occlusion of the egg ducts or changes in the ovaries.

In general, the duration of the spawning period for purposes of regulation should be based upon the average of conditions without attempting to cover every conceivable variation.

It is unfortunate that the time and duration of the regular spawning period for bass and the conditions which modify it from one season to another have not been accurately determined for various parts of the Province. It is known, however, that the average time or duration varies to a considerable extent. This variation must be determined by accurate observation. It has become clear to the Committee that in order to arrive at any fair solution of the problem of open season as applied to bass, and the public fishing privileges involved, the various factors outlined above must be thoroughly differentiated. It would be possible to determine more or less accurately what are the actual physical requirements of time to cover natural spawning. The question as to whether bass are injured by early summer fishing for maskinonge cannot be authoritatively answered. It is quite plain that conservational advantage would be served by lessening the total number of days during which the fish may be taken. On the other hand an arrangement that is intended to serve conservation by reducing the number of days, and at the same time allow scope to tourist trade requirement, is impossible except as a compromise.

The Committee believes that a practical, even if temporary, solution of the difficulty could be arrived at in the following way: Since the period of natural spawning must be covered, unless differential regulation is adopted, the opening date for the Province must be the latest date generally applicable, which may be taken to be July 1. From the reports available to the Committee, it appears that the question of the total number of days is relatively a more important consideration in the case of the bass than merely covering the requirements of close season, so that differential regulation is not as urgently indicated as shortening the open season. The closing date in October is in any case purely arbitrary. If, therefore, the period of open season were estimated for the bass as from

July 1 to October 14, and there were coincidently provided some type of game-fishing during the latter part of June, whether for maskinonge, pickerel or pike, the requirements would be largely covered.

This method would have two disadvantages. In the first place it would permit of a larger number of days fishing than is probably desirable in order to maintain supply. Second, the possibility would exist of some deception on the part of individuals fishing for maskinonge, pickerel or pike and taking bass at the same time. On the other hand, in view of the general desire to have some type of fishing permissible in early summer and fall, the plan would be worthy of consideration.

In this connection, it will be seen that the bass would receive protection during the early portion of the season in preference to other fishes, maskinonge, pickerel and pike, which, however, are all early spring spawners, maskinonge being further protected by the small number allowed to be taken in one day, while the pickerel and pike, not even yet regarded as game fishes, might be reasonably counted upon to relieve the situation brought about by the prohibition of fishing for bass.

In view of these circumstances, the Committee recommends for consideration: (*a*) That the open season for bass should be estimated primarily on a basis of allowing fishing from July 1 to October 14, or 106 days, with such later reductions as may be necessary.

(*b*) That in estimating the duration of open season, the total number of days during which fishing is permitted should be regarded as relatively more important than merely covering by means of a close season the requirements of natural spawning. (*c*) That consideration should be given as far as possible to the desire for at least a moderate amount of October fishing. (*d*) That the economic importance of having at least one species of game-fish or substitutive fish available for early summer fishing should be recognized in contrast to the loss and inconvenience of complete prohibition of game-fishing to a date as far along as July 1.

Whatever may be subsequently decided upon as a means of meeting either the demands of game-fishing interests or of conservation, more serious consideration should be given to the question of what is actually taking place in our waters as a result of maintaining comparatively long open seasons. Every hunter is aware that land game can only be pursued for a comparatively small number of days each year without rapid depletion taking place. Except for the protection afforded by the water medium, there is no reason for believing otherwise than that the bass and other game-fish are in the same position. Any other point of view means either that previously there has been a lack of consideration of this possibility or it has been taken for granted that game-fish would in some miraculous way maintain their numbers irrespective of the draughts made upon them.

4.—The Maskinonge

Although widely distributed throughout the Great Lakes and connecting waters and in various inland situations, this species has mostly a local significance. While generally appreciated as a magnificent game-fish, it is in many waters taken incidentally by sportsmen angling for other fishes, especially bass or pickerel. In such waters, the question of abundance or scarcity is not a live issue. In other waters, however, notably the Trent waters from Balsam Lake to Lake Ontario and the Lake of the Woods, possibly also the southern portion of Georgian Bay, maskinonge is an outstanding or predominant game-fish. It is, therefore, relied upon by sportsmen and also by others who profit from the tourist trade, so that maintenance of supply is a matter of considerable importance. Some waters, especially of the St. Lawrence in days gone by, have been important maskinonge waters, indicating that if replenishment is possible efforts should be made in that direction.

In considering the situation as regards this species, reference may first be made to the question of the number and size of fish permitted to be taken. The regulation permits a maximum of two maskinonge per day of no specified length. It has been suggested to the Committee that in the southern portion of the Lake of the Woods there should be a restriction to one fish a day of a minimum length of thirty-six inches. While, however, this would have the effect of cutting down the number of fish taken from the water, it would also result in a large number of fish being returned to the water possibly in a damaged condition, the effect of which should be estimated, both as mechanical injury and later injury owing to infection. In view of the small number allowed to be taken, it is probable that the removal of smaller fish, with which sportsmen are generally satisfied no restrictive or competitive length being set, is on the whole the most advantageous arrangement.

The close season for maskinonge is now established as from the 1st day of October to the 30th of June following, except in the St. Lawrence and Ottawa Rivers where the close season is from the 1st day of October to the 15th day of June following. The duration of this close season has been under discussion, especially as to the time of opening in the Trent waters, and as to the time of beginning close season generally.

As pointed out previously for the bass, the question of the date of beginning open season has to be determined on the basis of the following possibilities, partly a matter of natural requirement and partly a matter of general conservation, namely, (1) the average time of the year and duartion of the spawning period, to cover which the fish require protection; (2) the desirability of limiting the total number of days during which the fish may be permitted to be taken, the object being to conserve the supply; (3) the desirability of having angling begin at the same time for both bass and maskinonge, the object being to avoid having the late spawning species (bass) taken while on the spawning beds.

In the case of the Trent waters, more especially in the Kawartha division, objection has been made to the date of opening, July 1, on two counts, namely, that the prevention of game-fishing during the final two weeks in June is a hardship on individuals more or less dependent upon the tourist trade, and further, that since the spawning season for the maskinonge is well past by June 16, no useful purpose is served by postponing the opening to July 1, except as a limitation of the total number of days during which fishing may proceed.

The spawning period of fish being largely dependent upon temperature, it is reasonable to suppose, as certain representatives of the Kawartha Lakes have maintained, that the time of spawning for various fishes would be relatively earlier in the Trent system than elsewhere, especially in the upper and northern lakes. And the fact that the maskinonge, like the pike, is a relatively early spring spawner, would indicate, in conjunction with the probability of higher temperature, that the element of danger to natural propagation of this fish from opening on June 16, may be left out of consideration. Unfortunately, in this case as in so many others where records of spawning times and temperatures should have been available from all parts of the Trent system, we have at hand only detached observations. It has been reported to the Committee that maskinonge spawning in the southern portion of Lake of the Woods is well over by June 16, though there appear to be no technical observations available on the point. There is an enormous discrepancy between the present date of opening in Ontario, July 1, and the date of opening for the same waters lying within the State of Minnesota, May 15. It will be borne in mind also that, if a uniform regulation is to be applied for Ontario, earlier opening must be decided upon a basis other than that indicated for the Kawartha Lakes.

In regard to limitation of the total number of days during which fish may be taken, both the spring opening and the fall closing are concerned. Regarding the latter, there is some complaint of the closing of the season on October 1, the objection being that there are many sportsmen whose trade is valuable, who wish to fish at that time and that no protection save that derived from dire cutting down of the number of days fishing is afforded. The question is, therefore, for both spring and fall, a matter of the number of days fishing.

Neither in the Trent system nor in the Lake of the Woods has there been as yet any great amount of complaint of maskinonge depletion, these waters being the only ones from the point of view of the maskinonge, which have been urged upon the attention of the Committee. There is, therefore, no criterion to determine whether, except as a purely conservational issue, the total number of days should be cut down or not. It may be presumed that the persons immediately interested in the maintenance of good maskinonge fishing in those regions realize what will happen under conditions of disregard of this important relation between the total number of fish taken and the maintenance of the supply.

In discussing the matter in this way on a basis both of conservation and the obvious advisability of meeting, as far as possible, the requirements of tourist trade, the Committee realizes that in the future it will be the shortening of the total number of days during which maskinonge are permitted to be taken that will prove to be the deciding issue. Game-fishing for both maskinonge and bass covers practically the entire summer, or approximately one-third of the year. It is during this time that the fish have their opportunity to obtain in abundance the materials necessary for sustenance and growth.

As to the desirability of opening the angling season at exactly the same time for two species of fishes, in this case maskinonge and bass, there is not the slightest doubt as to the conservational value of postponing the date of opening, but the practical question now under discussion is, first, whether the lack of all game-fishing early in the summer unduly discourages tourist trade, and second, whether any particular good is accomplished by preventing the capture of one species while another, in this case the bass, is on the spawning beds. The answer to the first question is supplied in the case of the Kawartha Lakes and the Lake of the Woods, where there is apparently a good deal of loss. In many parts of the Province where tourists do not begin to move before the early part of July, the matter is of no especial consequence.

As regards protection to spawning fish, there is probably no serious difficulty because even if there were an earlier opening for maskinonge, the fact that these fish probably feed upon bass suggests that the removal of some of them during the spawning time of the bass might be as significant as the possible destruction of some of the bass by careless sportsmen fishing for maskinonge over or in the deeper water adjoining the spawning beds.

It would appear that the only practical method of meeting the present situation, if the loss of June and October fishing is to be temporarily avoided, would be along the following lines: In maskinonge waters or in combined maskinonge bass waters, the maskinonge being the earlier spring spawners would have to bear the stress of late June fishing. The opening of the maskinonge season on June 16 would in all probability cover the spawning requirement for all parts of Ontario and allow a good margin of safety for the Trent waters. Incidentally, in the Lake of the Woods an arrangement should be sought with the State of Minnesota by which the disparity of times of opening would be removed and the uniform date of opening be determined on a reasonable basis.

The fall closing for maskinonge must be estimated on an arbitrary basis. The conditions applying are the same as for the bass, with this exception, at least as reported to the Committee, that October fishing for maskinonge is especially desirable and attractive and that mid-summer fishing is not of great consequence. If the open season were estimated as extending June 16 to October 14, which would cover in part the requirements of early summer and at least early fall fishing, the total number of days involved would be 120, but a curtailment of fishing might be provided for by closing a certain number of mid-summer days, more especially if depletion were threatened.

There are certain aspects of the maskinonge problem which have to do with propagation. In the near future artificial progagation will have to be extensively developed, first, to ensure, if possible, maintenance of the supply in waters now dependent upon maskinonge fishing, and at least some others, including perhaps the southern part of Georgian Bay, where maskinonge fishing is especially desired; second, to attempt at any rate to re-establish the maskinonge in waters such as the St. Lawrence, where in former years the fish were abundant.

A special significance is given to the Trent system because of the presumed destruction of spawn by spring lowering of the water, and the outstanding importance of maskinonge fishing. Since, as pointed out elsewhere, it does not appear that the operation of the canals, however carefully controlled, can do otherwise than effect some injury, the active development of maskinonge hatcheries already begun by the Department should be seriously considered for the entire Trent system.

In the case of the St. Lawrence, that portion of the river between Gananoque and Lake St. Francis was formerly a well-known and prolific fishing ground for bass, maskinonge and pickerel, but is now seriously depleted. The difficulty exists in this region that the river is international water and that there has been here, as elsewhere, a general lack of co-operation as between the provincial and state interests concerned. It has been ascertained by the Committee that New York State has done considerable planting of maskinonge fry in the Oswegatchie River which empties into the St. Lawrence, and at other points on the river. So far as Ontario is concerned, probably a great deal could be accomplished in this direction, more especially if, in view of the present requirements of planting, the hatchery work could be organized at certain shore points so as to cover both the main portion of the St. Lawrence as above indicated as well as the shore west of Gananoque and especially the environs of Prince Edward County.

Because of the prospective importance of maskinonge propagation and also because of certain comments that have been made with reference to the preliminary work that has already been done in Ontario, the Committee has been to some pains to enquire concerning the present practice and outlook of maskinonge propagation as carried out in the special hatchery maintained by New York State on Lake Chautauqua. In this establishment some five to six million eggs are hatched and fry distributed annually. Some five millions are returned to Chatauqua, while about three-quarters of a million are distributed to other points in New York State, including those above mentioned to the St. Lawrence River. The eggs are extremely delicate and require expert handling at particular stages. The process is, however, well established and ought to be successful if carried out by capable men. The fish have to be distributed in the early fry stage, no plan having been found by which they can be practicably reared in large numbers to fingerlings or older stages. This is an undesirable feature, both because of the difficulty of ascertaining whether the fish when planted will have a fair chance of surviving, and because the time during which distribution must take place is strictly limited to a few days. On the other hand, the variety of waters in which maskinonge could be planted in Ontario is so great that in all probability very little study would suffice to place the fry where they would at any rate have a fair chance to come through to the stage where they would be able to shift for themselves.

In the particular situation that we have in this Province, both as to the time required to develop propagatory work and the importance of maintaining maskinonge fishing in certain waters to which many sportsmen have already become habituated, it may be earnestly commended to local residents of maskinonge waters that they should not rely at present, nor in the near future, upon the artificial propagation of maskinonge to maintain supply. They should, on the other hand, wherever possible, note and report injury at any time of the year to areas commonly used by maskinonge for spawning, hindrances to migration for spawning purposes of the parent fish, hindrances to return, and actual destruction of spawn. Some of these injuries are presumably inevitable in the Trent system, but nevertheless attention should be concentrated upon the practical necessity of protecting the fish as regards all conditions pertaining to natural propagation.

Summarizing the information at present available to the Committee, it appears that the maskinonge situation justifies the following recommendations:

(*a*) That the open season for maskinonge should be primarily estimated on a basis of allowing fishing from June 16 to October 14, or 120 days, with such later reduction in the total number of days as may be necessary.

(*b*) That for the present the beginning of open season should be regarded as for the purpose of covering the latest average date of spawning in the Province.

(*c*) That the maskinonge should be selected for late June fishing rather than the bass.

(*d*) That the convenience and value of having a game-fish or substitutive fish available for late June and early October fishing should be recognized as long as or to the extent practicable.

(*e*) That public attention should be called to the future necessity of materially reducing the total number of days during which maskinonge may be taken.

(*f*) That maskinonge propagation should be further developed for the special purpose of serving the Trent system, re-establishing fishing in the St. Lawrence, and providing where necessary, because of depletion, for such other parts of the Province as rely mainly upon maskinonge fishing.

5.—The Pike

There is probably no species of fish in the Province concerning which there is at the present time greater divergence of opinion than the common or northern pike. It is a general inhabitant of Ontario waters, usually in association with bass, pickerel, maskinonge and other lake fishes, but also occasionally occurring in the same waters as speckled or other square-tail trout. It is not included as a game-fish in the Dominion regulations and has no protection except that implied in the prohibition of commercial fishing in many waters.

It has been represented to the Committee on behalf of certain sections of the Province that the pike deserves greater consideration because it is a valuable fish, both from a game-fish and tourist standpoint. It has been represented on behalf of other sections of the Province that the pike is a coarse, piratical fish, highly injurious to other fish and that it should be removed or exterminated. The latter opinion is shared by many sportsmen and practically all commercial fishermen.

The esteem or preference accorded to the pike is apparently in part because of characteristics which the fish possesses by nature, even in waters where bass, pickerel or maskinonge are available. It may be presumed, however, that where supplies of more desirable game-fish become depleted, other species are called upon as substitutes, and this is no doubt what is happening at the present time in some sections of the Province in the case of the pike. In a word, the pike is being accorded a game-fish value, partly for its own sake, and partly as a substitute species.

In the discussion of the control of this species, it would be well to bear in mind that apart from the question of local esteem, certain natural relations of the fish are important.

It is known to be a fact that the pike is destructive to other fishes, and in the general range of associations of species, it is in all probability especially destructive to the bass. Under conditions of intensive fishing for bass, this destructiveness, if capable of analysis, probably would be shown to be of greatly increased significance. In the general run of fishing in game-fish waters, the pike, in all probability, would become in time the dominant fish.

On the other hand, under conditions generally obtaining throughout the Province in waters that can be described as combined bass, pike and pickerel waters, each species has been able to maintain itself, originally in abundance, by virtue no doubt of differences in natural habitat relieving or protecting it from undue competition. It is possible, therefore, that removal of pike in waters where the fishing is predominantly for bass would result in the maintenance of a more favourable balance.

A particular warning may be issued against the wholesale condemnation of pike or of other fishes that can be turned to account for sport fishing. Even a casual examination of the regulations and practices in force elsewhere shows that some species, for example catfish and sunfish, which in Ontario are scarcely recognized as of any value, are both protected and propagated. It may easily come to pass in Ontario that our supplies of game-fishes will ultimately be exhausted and that we shall be glad of having pike or any other fish which will serve the purposes of providing sport fishing. Furthermore, the removal of pike is frequently suggested without thought of the consequences either on the score of the direct injury to other fishes by the operation of removal or of the possible effect upon the natural balance of species and food organisms of the water.

In the case of the pike it would appear that the possibility of having any control method uniformly applicable to the whole Province is absolutely out of the question. Either the species must be controlled according to particular sections of the Province or not at all. Where bass, and possibly trout fishing is predominant and pike are plentiful, it is probable that reduction in number of the pike should be effected. This is being done by the Department at the present time for the better protection of the trout in the Nipigon River. In the interest of other fishes, the work should be done uniformly under Government supervision. Where, on the other hand, pike fishing is now predominant, for game-fishing purposes, or in sections of the Province in which the pike is generally recognized as desirable from a game-fish or tourist standpoint, protection should be afforded. Such waters are probably at the present time in the minority in Ontario.

The Committee suggests the following provisions:

(1) That the pike should have a semi-game fish rating which on the game-fish side would recognize restriction of capture to angling in game-fish waters.

(2) That in sections of the Province in which pike fishing is relied upon for game-fish or tourist purposes, the usual protection should be given to the extent of close season and maximum number permitted to be taken in any one day.

(3) That where other fishes are the predominant game-fishes removal of pike as undesirable fishes should take place only under Government supervision.

6.—LAKE TROUT

As outlined in a previous section the necessity of further adjustment of game-fish and commercial fish rating has arisen through increase in demand and value of the game-fish interest. It is no longer possible to look upon the lake trout as a purely commercial fish, even in waters open to commercial fishing. With increased demand for tourist fishing, there is more general recognition of the fact that the lake trout is by nature well adapted for sport fishing; further that it is to some extent available in water easily reached by sport fishermen and, generally speaking, even in summer available in moderate depths.

There appear to be at least five aspects of the lake-trout situation which are of interest to game-fishing, namely:

(*a*) In inland waters close season protection for lake trout, formerly applied only to commercial fishing, has recently (1929) been extended to angling, the latter being no longer excepted.

(*b*) In some inland waters of the Province commercial fishing is allowed.

(*c*) In the Great Lakes, including more especially certain all-Canadian waters, Georgian Bay, the North Channel, and the Bay of Quinte, there is no close season for lake trout.

(*d*) In the Great Lakes, especially in the waters above mentioned, game and commercial interests overlap.

(*e*) Even in commercial waters, anglers may take not more than five lake trout while commercial fishermen may take all they can catch.

Commenting upon this situation, it may be pointed out that in the years prior to 1929 the provision for close season for protection of lake trout in inland waters applied to commercial fishing but not to angling. No distinction was made as regards inland waters open to commercial fishing as opposed to waters reserved for game-fishing, though it may have been presumed that in larger areas open to commercial fishing there was no particular need of angling restriction, or possibly also that the minor use of non-commercially fished inland lakes for angling purposes did not result in any great drain upon the supply. No such view is, however, justifiable under present conditions, in the first place because lack of protection during the spawning season is unwise and thriftless in any case, and, second, because especially in smaller lakes the supply of lake trout is probably limited by food factors, while deep or summer trolling on the part of sportsmen and residents is growing and will doubtless in future be greatly increased. In view of the fact that the fish may easily be taken throughout the summer on copper or other deep-running lines, and may similarly be taken at or near the surface in spring and fall, or even taken through the ice in winter, it is obvious that protection afforded them during the spawning season when in a most vulnerable position upon the shoals has the double advantage of affording the necessary protection for the spawning process itself, and of clearing the way for the identification of individuals currently reputed to profit by the fall run of fish by capturing them with less worthy gear.

Reference has already been made elsewhere to the desirability of having a definite policy in the direction of conserving game-fish in inland waters and of reducing the amount of commercial fishing, except where the lack of tourist demand or other conditions characteristic of the larger bodies of water demand consideration.

Reference is also made elsewhere in this report to the unfortunate lack of constructive handling of the close season issue as regards the Great Lakes or international boundary waters. In respect of game-fishing and except for certain prohibitory inshore lines, the non-existence of close seasons in the Georgian Bay, the North Channel and probably other portions of the shore of the Great Lakes removed to a considerable distance from the international boundary, results in the destruction of lake trout during the whole time that they are in shore for purposes of natural propagation and is in complete negation to the laws of common sense.

The overlapping of game-fish and commercial fish interests is indicated in inland lakes now open to commercial fishing licenses. This may be expected to be eliminated by a general policy looking in the direction of reducing commercial licenses where game-fish interest predominates. In the Great Lakes, more especially in the waters now extensively used or beginning to be developed as tourist resorts, the commercial fishing appears to a certain extent as an encroachment upon angling privileges. What is indicated in this case, and in all probability more especially in the Georgian Bay and the North Channel, is that the entire inshore zoning arrangement for the protection of angling should be reviewed and where necessary the commercial fishing privileges arranged so as to fall entirely outside of areas in which angling predominates.

As an example of the present condition, it may be pointed out that the main or northeast shore of Georgian Bay with its 30,000 or more islands has in the course of time come to be occupied by a very large summer resident population, including some 2,500 private cottage owners as well as tourists at hotels and summer camps. It is a region where a very large percentage of visitors are interested in game-fishing. As far back as 1892, a Dominion Commission recommended the establishment of a commercial fishing line extending along this shore, inside of which no commercial fishing was to be permitted. This Commission defined the line and the definition was confirmed by a later Commission in 1908. So far as the Committee has been able to ascertain, this line was not legislatively confirmed, but it has nevertheless, in general, been adhered to in the issue of commercial fishing licenses.

Under present conditions this line has several disadvantages, namely:

(*a*) On various parts of the shore it leaves outside and in the commercial fishing zone many stretches of shoal water which should be recognized as game-fish and spawning areas.

(*b*) The line was proposed thirty-seven years ago when the tourist requirement of this shore was but a small part of what it is now.

(*c*) Commercial fishing has for one reason or another been allowed to some extent within the line.

(*d*) There being now no close seasons for lake trout in Georgian Bay, the commercial fishing line should be placed far enough off shore to ensure the maximum use of the shoal area for spawning.

In this particular case, the suggestion has been made, and the Committee is in accord with the principle, that the line should be redefined so as to bring the commercial fishing not less than five miles off shore.

Comment has been made during the progress of this investigation on the difference in privileges as between angling and commercial fishing in the same waters. Anglers are allowed to take five fish in any one day while commercial fishermen naturally take all they catch. This restriction of the angler has an obvious value, both in respect of purely game-fish waters and the utilization without wastage of the fish captured. On the other hand it becomes inappropriate and to a certain extent ridiculous when, for lack of zoning arrangements between game-fish and commercial areas, it is applied to anglers in the Great Lakes.

As regards propagation, viewing the matter from the standpoint of the game-fish requirement only, it may be observed that the hatcheries of Ontario and the operations involved in supplying them with eggs are eminently suited to the handling of lake-trout eggs in large numbers. The hatcheries, however, are not equipped for raising fry to the late fingerling or older stage, except to the extent of handling small numbers in the inside hatchery troughs. The problem as to whether rearing facilities should be provided, while probably not in question as to general desirability, cannot be ascertained because of the uncertainty that exists as to whether supplies of young fish are greatly required for game-fish waters. The raising of lake trout beyond the small fingerling stage is apparently not in general practice.

In 1927, the Ontario hatcheries distributed somewhat over two million lake-trout fry to game-fish waters and about nineteen and one-half millions to commercial waters. Of the latter, upwards of fifteen million went to the Great Lakes. There is no close season on the Great Lakes. Sentiment among commercial fishermen appears to be in favour of unrestricted fishing, reliance being placed upon the hatcheries to maintain the supply. The propriety of the Province constructing and maintaining hatcheries under these circumstances is open to question, let alone the propriety of establishing rearing ponds for lake trout. This state of affairs may be considered to leave open the possible issues that such ponds may be advisable for the supply of lake trout to game-fish or inland waters alone. In this connection, while as a rule lake trout are not represented as game-fish upon which major alliance is placed, there are, as reported to the Committee, important exceptions—for example, Sharbot Lake and Lake of Bays—and there are possibly many waters in the Province in which lake trout restocking would be of special significance in comparison with the practice now in operation of the general restocking of inland waters.

In the case of the lake trout, the Committee recommends the following points for consideration:

(*a*) That lake trout should receive a game-fish or semi-game-fish rating which would recognize restriction to angling in areas where the interests of angling may be held to predominate, and that in addition to present restrictions, close season protection should be afforded both on the basis of the angling and the commercial fishing requirement.

(*b*) That special attention should be given to the restocking of certain inland waters in which lake trout are relied upon for major game-fishing requirements.

(*c*) That the commercial fishing line extending along the main or northeast shore of Georgian Bay should be redrawn some five miles off shore with the object of giving greater attention to the predominantly game-fish interests of this region; further that the principle be applied to other areas in the Great Lakes as indicated elsewhere in this report.

7.—The Pickerel

The species commonly designated as "pickerel" in Ontario are properly speaking pike-perches. The term "pickerel" is more appropriately applied to a young pike or by inference and rather general usage in America a small species of pike. The designation "pickerel" is, however, so commonly used in Ontario that it is here retained. In this Province, some four species or varieties of pickerel or pike-perches occur of which only one, the so-called yellow pickerel or dore, is of significance from the game-fish standpoint.

As indicated elsewhere in this report, many years ago, before the necessity of protecting the game-fish and of protecting the natural propagation of fishes generally, all species of fishes were taken in any number and freely bought and sold. The pickerel was an abundant fish, so much so that some of the incidents reported as to its capture in enormous numbers and quantities seem almost incredible at the present day. The fact that the pickerel is not such an actively fighting fish as the maskinonge or bass, doubtless gave to the species a second-rate ranking when better game-fish were abundant. And its occurrence in enormous quantities, especially in certain parts of the Great Lakes, readily gave rise to a commercial fishery, and to the gradual recognition of the commercial interest as being the principal one so far as the pickerel is concerned.

What has been said elsewhere regarding the game-fish importance of the lake trout is true in a much larger measure of the pickerel. It is a vigourous, carnivourous species which has an almost exclusively inshore range. When fished for at the proper time of day or in dark waters, it readily takes the angler's lure and has sport qualities which at least satisfy the ordinary requirements of game-fishing. It has excellent table qualities and in this respect is preferred by many sportsmen to the black bass. Being an early spring spawner, it may be fished for when bass are on the spawning beds. In practically all bass waters in which the pickerel occurs, it tends to share honours with the bass. Already thirty years ago in older tourist waters, more especially the main Muskoka Lakes, it was a commoner constituent of the angler's catch than the bass itself. Throughout the main shore waters of Georgian Bay, and doubtless elsewhere in the Province, it has been an important buffer for the black bass, providing an acceptable substitute, especially where supplies of bass were becoming depleted.

In all bass waters, in which it may be anticipated that closure will in the near future be necessary, the game-fish interest will have to be met by the substitution of pickerel, otherwise there will be no game-fishing, with consequent dissatisfaction among sportsmen and probably great injury to the tourist trade. Even in waters that are not primarily bass-pickerel waters, for example, in bass-maskinonge waters the same thing is likely to occur.

In the case of enforced closure or of advanced depletion as applied to the principal game-fish, the situation is likely to become critical. This would indicate the advisability of making certain wherever possible that such game-fish waters should be stocked with pickerel, and further that where attempts at stocking with pickerel have previously failed, special efforts should be made to ascertain if by any improvement of method the successful introduction of pickerel may be accomplished.

It is doubtful whether a fish of the general qualities of the pickerel should ever have been regarded as a commercial fish. But the point of view that the pickerel is or ought to be so regarded is so thoroughly ingrained and taken for granted by commercial fishing interests that the suggestion of reduced licensing of pickerel fishing would undoubtedly lead to considerable opposition. There seems to be no doubt, however, that in regions suitable for summer residence, and occupied or beginning to be occupied by increasing numbers of summer residents, tourist hotels, or camps, it will be necessary very soon to reserve the pickerel fishing for angling purposes.

Under these conditions, it will not be sufficient to reserve from licensing waters immediately in the vicinity of such resorts, because the pickerel after the spring migration inshore for spawning purposes is likely to move to a considerable distance off or along shore. The existence of commercial fishing in the general region, though it may be some distance away, may have almost as much effect so far as the stock of fishes available for angling is concerned as if in the immediate vicinity. In the case of the main or northeast shore of Georgian Bay, it is doubtful if the so-called commercial fishing line is sufficiently distant from the main shore and islands to protect the pickerel which are immediately needed on that shore for game-fishing purposes.

At the present time, the pickerel has but little protection in the Province. In angling, not more than eight fish may be taken. They must be of a minimum length of fifteen inches and may not be sold.

In the Great Lakes and in such inland waters that have commercial licensing for pickerel these restrictions possibly have some little value, but are nevertheless of no particular significance. In waters where game-fishing only is permitted, the restrictions have somewhat greater value. It is obvious, however, that since eight fish of the minimum length indicated might easily mean some twenty or twenty-five pounds taken by one person in a day possibly in addition to other fish, for example bass, the present maximum number could with advantage be reduced.

There is at present no close season for pickerel in the Great Lakes, including Georgian Bay and the North Channel and connecting waters.*

As pointed out elsewhere for the lake trout, the lack of a close season on the Great Lakes is unfortunate because of the fact that no protection is given for insuring natural propagation. It is especially unfortunate in the case of Georgian Bay, an all-Canadian water, the shores and islands of which are occupied by very large numbers of summer residents.

Artificial propagation of the pickerel is extensively practised. The young have to be planted in the fry stage. The Province has been engaged in pickerel propagation since 1918, and planting has in general taken place in both game-fish and commercial waters. For some time previous to 1918 a certain amount of artificial propagation and planting was carried on by private interests. The pickerel hatchery at Port Carling is especially designed and situated to serve the game-fishing of that region. In 1927, pickerel distribution amounted to upwards of two hundred million to commercial fish waters, shared to some extent by game-fishermen, and upwards of thirty millions distributed to game-fish waters alone.

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*Comment on the lack of close season protection for pickerel in inland waters is apparently based upon the statement contained in the Departmental book for 1928, from which the regulation in force in previous years, and recently confirmed (1929) was for some reason omitted.

In view of the probability that greater dependence will in the future be placed on the pickerel it would be advisable to have a special study made of areas becoming depleted of bass with the object of concentrating to some extent upon pickerel planting in such waters. It would be advisable also to determine the results of planting in game-fish waters as far as practicable, in order to have for future propagatory work a safe guide for procedure.

And it will be advantageous to determine if possible the replacement value or possibilities of pickerel in maskinonge waters in anticipation of maskinonge depletion.

Reviewing the pickerel situation, the Committee recommends:

(*a*) That the yellow pickerel or dore should have a game-fish or semi-game-fish rating which would recognize restriction to capture by angling in waters where game-fish interest predominates.

(*b*) That close season protection should be provided in all waters irrespective of particular game-fish or commercial fishing interest.

(*c*) That consideration should be given to the adequacy of a smaller number permitted to be taken in one day for game-fishing purposes.

(*d*) That the significance of the pickerel as a substitutive fish under conditions of depletion of bass or maskinonge or in the event of closure applying to either of these species should be recognized.

(*e*) That propagation and restocking should be rapidly developed with especial reference to those waters in which pickerel are depleted or in which the cultivation of pickerel is desirable in order to provide a substitute game-fish for bass or maskinonge.

(*f*) That special effort should be given to the investigation of the results of former plantings of pickerel fry in game-fish waters.

THE IMPORTANCE OF LOCAL SITUATIONS

In addition to the participation of various associations in the representations presented by the Ontario Federation of Anglers and applying in a broad way to the Province in general, the Committee has had at its disposal over one hundred communications representing local centres. They include, incidentally or by special reference and study on the part of local bodies, observations and suggestions concerning the following sections of the Province:

Eastern Counties and the St. Lawrence River.

The Rideau system, associated and inland lakes of the related counties.

The Trent Waterway, connecting and contributing waters, including lakes of the related counties.

Prince Edward County and the Bay of Quinte.

The southwestern peninsula, including both Great Lake and inland waters.

Georgian Bay and the North Channel.

Muskoka Lakes, Lake of Bays and various inland centres in the districts of Muskoka and Parry Sound.

Lake Nipissing and the French River.
Timagami.
Timmins.
Sudbury and district.
Sault Ste. Marie and district.
Port Arthur, Fort William and district.
The Lake of the Woods, north and south sections centering respectively on Kenora and Rainy River.

After a careful study of these communications, the Committee is of the opinion that no useful purpose would be served by the immediate publication of the general body of information, comments and representations as it now stands, the reason being that what is immediately available is in reality only a partial contribution, although a most important one, to a general enquiry which ought to be carried out systematically in all parts of the Province. At the risk, therefore, of some injustice to local bodies, some of whom have been to great pains to analyze the conditions obtaining in their respective districts, the Committee decided to use the local information obtained, in so far as it did not apply to conditions of broader applicability in the Province, simply as a basis for illustrating the importance of local situations in contrast to one another, and therefore the desirability of a thorough technical and economic survey of the Province.

It may be taken for granted that the effectiveness of any governmental arrangement depends upon its suitability for meeting the requirements of various types of local situations. Local situations are of paramount importance. They constitute for every person, directly or indirectly interested, the primary basis of legislative arrangement. There must be in every respect an adjustment of the common authority to the local situation and similarly a general alignment of the needs of the latter to the common authority. These facts or principles are so fundamental and axiomatic that no one would think seriously of questioning them. But, nevertheless, as applied to the game-fish situation in this Province, they are very far from being generally understood or appreciated. If a general regulation (cf. pickerel and lake trout, continuous open season in Georgian Bay, pike as game or coarse fish, close and spawning seasons of various species) does not fit a given local situation, the fault is with the regulation.

A fundamental weakness of game-fish regulation under Government auspices is its inability of applying the principle of local self-government. The effects of this condition may be exaggerated even to the point of general ineffectiveness and dissatisfaction when physical or natural conditions are very different in different sections, when the economic requirements are very different, when there is a lack of contact between the Government service and the local authorities, and finally, when the primary authority is so far removed that it makes local adjustment impossible or difficult.

The various representations which have been made to the Committee demonstrate clearly that not simply one but all these conditions obtain to a greater or lesser extent in the Province and that it would be well worth while considering in what ways the needs of local centres could be more adequately met.

As has been pointed out previously, the fact that the various parts of the Province are geologically, climatically, and from the point of view of natural game-fish habitats, diverse, indicates that the practice of framing regulations which would apply without elasticity or modification to all parts of the Province is in many respects basically unsound. On the other hand, in practice a local request or recommendation, for example, that a close season should, on account of such differences, be varied, which recommendation might on thorough examination be found to be perfectly sound, would under present conditions have to run the gauntlet of the entire administrative machinery through the Province to the Dominion Government, which latter may, like every other primary authority, be more interested in general than in local regulation.

Again, no two sections of the Province are alike in their relation to former conditions as game-fish utilization and more especially to present conditions as regards depletion, game-fishing requirement, summer resident or tourist requirement, accessibility by railway, motor road and many other factors which in general make up the local situation on the economic side. The local incidence of many of these factors considered individually varies in Ontario from nothing to one hundred per cent. Yet if one section of the Province requests additional protection or recognition of certain fishes as game-fishes involving a regulation not applicable to other parts of the Province the request may easily be lost sight of or refused in the interests of general regulations.

Leaving out of account the uncertainty that has come into game-fish control as a result of the lack of public understanding and definition of the respective authorities, it is very plain from the representations received that there exists a very general sentiment to the effect that too much emphasis is being placed upon the centralization of authority and uniformity of regulations, and that too little attention is being given to local requirements, and that a counterbalance is required that will give proper consideration to local interests.

A study of this question seems to indicate that in addition perhaps to seeking better machinery of regulation, better definition of authority, and improved means of contact between the provincial service and local interests, some effort ought to be made at once to ascertain, record and classify the peculiarities which exist locally throughout the Province. The information available from local sources can be used, as indeed it has been used in the preparation of this report, to obtain the combined sentiment of the Province with regard to general regulation. But in a perhaps more important way it could be used as the basis of an economic study of the game-fish possibilities, tourist trade, transportation facilities and other matters in which both the Province as a whole and the local centres are vitally interested, and in respect of which undoubtedly a great deal of local difference would be found to exist.

Elsewhere in this report, reference has been made to the necessity of ascertaining by scientific survey the natural characteristics and potentialities of our waters from the point of view of game-fish production. An economic survey which would primarily involve the significance of local centres from the point of view of facilities and trade, based on game-fish utilization, but would bring together the various components so as to yield a combined picture of the potentialities of the Province, would also be of great value. The Committee recommends that this economic survey should be carried out, using as a basis the material at hand, but extending the investigation so as to cover completely all parts of the Province.

CONCLUSION

In concluding this report, the Committee wishes to make especial reference to the service rendered both to its deliberations and to the cause of game-fish conservation by the sportsmen of Ontario. For many years there have existed in the Province associations of sportsmen, endeavouring, often under conditions of unusual difficulty, to stimulate local interest in the protection of the game-fish resources. Records show that there has not been lacking in Ontario a succession of men both in and out of Government service who refused to accept the common platitudes either that the resources were inexhaustible or that they could prosper under inexpert management, and who foresaw clearly that if improvement were to be effected, it could be done only by vigourous active leadership on the part of the Government, supported and reinforced by intelligent public opinion. Within the last two or three years, the organization of public opinion, in so far as the game-fishes are concerned, has been largely accomplished and public sentiment favourable to conservation greatly augmented. The sportsmen of Ontario and their associations have been to considerable trouble and expense to bring about improvement of public opinion and to make clear to the Government that what they most desired was an impartial investigation of the facts followed by constructive action. While the Committee in all such cases has been in receipt of various kinds of information, the sportsmen have responded willingly to the request of the Committee that they should state their cases, having in mind the best interests of the Province and of game-fish conservation. Both in the representations that have been made and in the course of the conferences which were held in various parts of the Province, the Committee has been gratified to observe that these gentlemen, while outlining the needs of their respective communities have asked for little more than that the Government should recognize the urgency of the game-fish situation. The Committee on its part, while preserving an independent attitude throughout, has found in these representations not only a great number of valuable suggestions, but also the assurance that they express in the main the desire for progressive and aggressive action.

The Committee further takes the opportunity of expressing its appreciation of the services rendered by Professor W. J. Harkness, who as Secretary contributed in innumerable ways to the compilation of the results and to the activities of the Committee generally.

F. G. Macdiarmid, *Chairman.*
C. N. Candee.
B. A. Beasley.

25th March, 1930.

SUMMARIZED RECOMMENDATIONS*

1. While it is to be admitted that both the nature of the administrative machinery and various kinds of external and objective factors have bearings of similar importance as regards the game-fish situation, the Committee believes that any discussion of internal organization is more properly a function of the Provincial Government, and therefore reports the following issues as more or less generally suggested by collective public opinion and further as worthy of consideration:

(*a*) There is a well-defined sentiment in the Province that with the growing importance of the Department of Mines, on the one hand, and the far-reaching importance of game and fisheries, on the other, the Department of Game and Fisheries should be made one of major importance.

(*b*) There is a widespread conviction that greater recognition should be given to the community of interest existing in various ways as regards forest, game, and game-fish conservation.

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*These recommendations are submitted solely for convenience of reference. Not being individually self-explanatory, they should be read in conjunction with the sections of the Report to which they otherwise refer.

(*c*) There is a very general opinion to the effect that either through administrative organization or by more definite arrangement the establishment of closer public relations on the part of the service would be advantageous.

In view of the fact that the present organization and ramifications of the Government services have been evolved as a result of practical experience, the Committee believes that the matters above mentioned should be favourably considered to the extent consistent with limitations imposed by various service requirements peculiar to the Province.

2. With the object of making the work of the Department of Game and Fisheries better known and appreciated throughout the Province, and further of encouraging and utilizing the efforts of local associations of sportsmen and of municipalities in the direction of game-fish conservation, a plan of publicity should be adopted, involving either separately or in combination:

(*a*) Personal visits on the part of senior departmental officers to confer with local associations and related interests.

(*b*) Appointment of a special publicity or liaison officer of educational and technical qualification for service in various parts of the Province.

3. The entire conduct of game-fish administration should be consistently maintained on an independent service basis.

4. In view of conditions now existing in the Province, and in anticipation of greatly increased demand on the game-fish side, the hatchery system should be developed rapidly along game-fish lines, emphasis being placed upon new sites and construction appropriate to the various species concerned, including speckled trout, bass, maskinonge and pickerel.

5. Efforts should be especially directed to the provision of outside rearing ponds, spawning ponds, and retaining ponds, which should be developed in order to cover the necessities of rearing young fish to the late fingerling or older stage, semi-controlled natural spawning of bass, and to some extent accommodation of parent fish.

6. Public discussion should be invited on the question as to whether non-native species are to be encouraged in the Province and a definite policy adopted on this issue.

7. In view of current criticisms in Ontario and elsewhere as to the effectiveness or non-effectiveness of fry planting, and the circumstance that there is not as yet available a sufficient body of quantitative facts bearing on the question, it is urged that all planting should be regarded as a problem to be solved by technical investigation, and that in any event the rearing of fish to a late fingerling or older stage will be found to be advantageous for all game-fishes which can successfully be carried through and beyond the fry stage.

8. The importance should be recognized of determining in advance by survey methods the fundamental characteristics of waters in which it is proposed to carry out planting operations.

9. Application of the principle of closure is becoming increasingly urgent in Ontario. Closure to game-fishing of water areas, whether as complete lakes, bays or parts of streams, for stated periods of years, or permanently for the supply of adults or fingerlings needed by the Department for restocking, should be very extensively applied, in order that the requirement of time for natural growth and distribution in waters otherwise more or less continuously overfished may be met.

10. In view of the general opposition which may be expected to result from closure and similar curtailment of personal privilege, it is recommended that

the Provincial Government should give consideration to the advisability of adopting the principle of general closure, with secondary opening of any part or area, as a means of declaring public ownership, reservation and disposition of the game-fish resources.

11. Game-fish sanctuaries should be more extensively established throughout the Province. They should be defined as bodies of water, enclosed or unenclosed, Government-owned or designated, and posted, which are closed permanently, to be used, when enclosed, for departmental distribution of adult or young fish, and, when unenclosed, for natural dispersion.

12. While adhering to the principle that Ontario waters should continue to be available for public fishing, adjustment should be made throughout the agricultural portion of the Province, so as to remove popular confusion as regards water rights, and provide as necessary for the adequate protection of the following classes:

(*a*) Farmers and other landowners who wish to grow fish in waters situated upon or passing through their lands.

(*b*) Private clubs and municipalities desiring to engage in fish culture, when recognized or specified as being of public benefit.

(*c*) Groups of landowners willing to protect trout in upper headwaters with public fishing in the lower reaches.

13. In the cases specified under section 12, prosecutions and penalties should be established on a basis of ownership of the fish, private or governmental, as well as upon the common basis of trespass.

14. The use, possession or sale of fish spears of any kind should be prohibited in Ontario.

15. The use, possession or sale of gill nets of any kind, or of netting of the gilling type, should be prohibited, except under authority of a commercial license or special permit issued by the Department.

16. A specific regulation with penalties attached, prohibiting both the taking of fish, and unnecessary destruction of fish, by the use of dynamite or other explosive material, should be included in the fisheries regulations.

17. Angling at night should be prohibited by special regulation.

18. The setting of night lines, and other methods of taking fish, not authorized as "angling," should be prohibited by special regulation rather than by the negative implication that they do not constitute angling as defined in the regulations.

19. The term "coarse," "rough" or "trash" fish should not be used, or if used the species meant should be designated.

20. Removal of species held to be undesirable should not take place without thorough local investigation of the alleged injuries which such species are presumed to bring about.

21. The removal of undesirable species should take place only under Government supervision.

22. The regulations regarding the capture of bait minnows should be made uniform as between nets permitted and nets licensed.

23. Nets for capturing bait minnows, other than special traps of specified form, composition, or size, and hand or landing nets of specified maximum diameter at the mouth, should be restricted to flat dip nets measuring not more than six feet and all others should be prohibited except for Government, educational, or scientific purposes.

Nets of the minnow-seine type, if legalized at all, should be limited to a maximum length of ten feet and a maximum depth of two feet.

24. The prohibition of the transfer of live minnows from one lake or stream to another for restocking purposes, except under permit from the Department, and likewise the prohibition of the liberation of unused bait minnows taken from other waters, should be separately set forth in the regulations.

25. The sale of live minnows, except for use in adjacent waters, should be prohibited.

26. The sale or transfer of live carp minnows should be specifically prohibited except where captured and used in the same waters.

27. In view of alleged injuries to game-fish as a result of lowering and raising water levels in the Trent and Rideau Canals, the Department should maintain some type of inspection of the waters in question and where injury is reported confer with the Dominion authorities on control measures.

28. In cases where proposed alterations, repairs or constructions on these canal systems threaten to be injurious to the game-fish interest, the Province should assume such expense as may be desirable for purely protective purposes.

29. The Provincial Government should take cognizance of the situation created by the lowering of inland lake and river levels, brought about by the decay or destruction of abandoned timber dams, and where maintenance of former levels is advisable in the interests of game-fishing or transportation facilities for settlers and others, should take steps to place these dams in a good state of repair.

30. The Dominion regulations regarding fishways should be given advertisement through the publications of the Department, but the general policy of enforcing the provisions should be subject to exception in the case of bass, maskinonge and pickerel waters.

31. Fishways should be provided in trout streams where dams are already constructed or proposed to be constructed, when it is found or anticipated after proper investigation by the Department that there is or would likely be hindrance to upsteam migration resulting, or likely to result in depletion of the fish supply of the upper waters.

32. A check should be put upon the indiscriminate building of dams or other hindrances to migration without proper consideration of the game-fish interest.

33. In view of the complaints that are made concerning pollution of waters and injury to fish life, and in view of the progress that has been made elsewhere in dealing with this problem, the Provincial Government should adopt an aggressive policy of correcting this condition either on a fishery or public health basis, and should give publicity to the Dominion fishery regulations bearing on the issue.

34. In view of the complaints that are made concerning certain birds alleged to be injurious to game-fish, consideration should be given to the advisability of having American mergansers destroyed by departmental officers as provided for in the Migratory Birds Convention Act, and to the further investigation of the alleged injuriousness of the Common Kingfisher and the Great Blue Heron.

35. Angling, including trolling from boats of any type while in motion, under sail or mechanical power, should be prohibited.

36. In the interest of better public understanding of the regulations, the Department should issue an informative booklet in which:

(*a*) The primary source of game-fish and fisheries authority should be defined.

(*b*) The Dominion regulations should include both general (pollution, fishways, hindrances to passage) and special (sizes, seasons, etc.) regulations applicable to fish or fisheries in Ontario.

(*c*) The provisions of the Ontario Game and Fisheries Act pertaining to fisheries should be extracted or recodified and printed separately from the provisions covering birds and mammals.

(*d*) The regulations regarding both game-fish and commercial fish should be included, so that both game-fish and commercial fish interests may be informed as to their respective rights and privileges.

37. Both Dominion and Provincial regulations should be revised from time to time in keeping with current conditions in order that the requirements may be covered and the provisions worded in such a way as to ensure clarity and intention.

38. The importance should be recognized of issuing to visiting tourists and others illustrated literature, bulletins, or folders giving information concerning the game-fish atrractions of the Province, tourist routes and centres, regulations, method of procuring licenses, coupled with some information of a conservational nature and a friendly warning that we intend to have our laws obeyed.

39. The opinion generally expressed by sportsmen is that game-fish protection and other matters of conservational advantage will make little progress along lines of establishing public opinion, except under conditions of active Government leadership. In view of the fundamental importance of public school education in this respect, it is urged that the Department of Education should give consideration to the advisability of including some form of conservational instruction in the school curricula, and should give encouragement to essay contests and other means of engaging the interest of the youth.

40. Because of the diversity of natural and economic conditions in the Province, greater attention should be given to the principle of local regulation as opposed to uniformity of regulation for the Province as a whole.

41. For the purpose of increasing the number of species utilizable as game-fishes, certain species, at present pike, lake trout and yellow pickerel, should be given a definite game-fish or semi-game-fish rating. Semi-game-fishes may be described either as individually designated kinds, in accordance with the method of classification of the game-fishes in the Dominion regulations, or as fishes which in purely game-fish waters may receive the same kinds of protection afforded to game-fishes, and in waters generally open to commercial and game-fishing may be locally reserved for game-fishing purposes where game-fish interest may be reasonably held to predominate.

42. Because of the increasing demands of game-fishing and summer-resident interest, and the manifest value to local communities of the tourist trade, further reservation of waters for game-fishing purposes should be carried out, more especially along the following lines:

(*a*) Reduction of commercial licensing in inshore waters, both in the Great Lakes and in inland lakes where game-fish interest, estimated on the basis of the existence of attractive residential sites or facilities, and of large or growing communities of summer residents, may be reasonably held to predominate.

(*b*) Special consideration of the claims of local associations on behalf of the non-resident tourist population.

(*c*) Definition and public announcement of the areas respectively reserved for game-fishing or commercial fishing purposes.

43. The attention of the Provincial Government is invited to the circumstance that the interests of game-fish conservation are in danger of being less subject to effective control, directly or indirectly, through the lack of co-operative agreement as regards regulation of close season and times or conditions of capture as between the Province and the Dominion, and as between either or both and the tier of-states bordering on the Great Lakes.

Consideration is urged of the following facts:

(*a*) Lack of provision of close season for pickerel and lake trout in the Great Lakes, including the very important tourist waters of Georgian Bay and the North Channel.

(*b*) The fact that the hatcheries of Ontario are being operated at considerable expense and are being relied upon to make up the deficiency caused by lack of protection of fish during the natural spawning period.

(*c*) Lack of more direct control and elasticity of regulations as applied to local needs.

(*d*) Lack of publicity given to important protective regulations not of Provincial origin, especially concerning fishways and water pollution.

(*e*) The tendency to enlarge rather than to restrict privileges to citizens of the Province and the respective states individually because of privileges presumed or known to be possessed by citizens of other states or of the Province, notwithstanding the obvious injury to the fishes themselves.

44. The number of District Superintendents in the northern part of the Province, including the area westward from Nipissing to Kenora and Rainy River, should be increased.

45. The importance of the District Superintendents in organizing protective and co-operative conservational opinion in their respective districts should be recognized and this type of service developed as of specific value to the work of the overseers and of general value in establishing improved public relations.

46. The staff of overseers should be considerably increased with especial reference to waters where complaints of poaching are common, where the physical conformation of the shore is such that it renders detection difficult, and where tourist occupation is in an advanced stage of development.

47. Overseers should be provided with proper equipment so that they can cope with conditions now unduly advantageous to law breakers.

48. Efforts should be made in the near future looking to a remodelling of the present type of organization as regards overseers along the following lines:

(*a*) The production of a uniformed force of disciplined men with special training and qualification for the work.

(*b*) Utilization of the younger, active men for field service.

(*c*) Provision of some arrangement for at least moderate promotion of older experienced men, according to the plan usually followed by police, military and similar organizations.

(*d*) A general revision upwards of the scale of salaries.

49. In the interests of economy, and because of the enormous areas to be protected in the Province for different purposes, the Provincial Government should consider the advisability and practicability of organizing a general force of field officers for natural resource and policing service, the force being sectionally assigned for major work as regards particular branches of the Government service, but having minor, accessory or general supervising duties.

50. In view of the difficulties to be overcome by overseers and other officers in obtaining prosecution of offenders, for various reasons incident to the service,

investigation should be made along the following lines to ascertain if these difficulties can be lessened:

(*a*) More complete and simplified definition of the list of offences on the basis of which the officer is expected to make arrests, including all general regulations affecting his service.

(*b*) Some legal definition or instruction as to the class of evidence upon which the officer may reasonably expect to rely in making prosecution.

(*c*) Reconsideration of the applicability of the regulations designated as sections 58, subsection 5, and section 65, subsection 1 of the Provincial Game and Fisheries Act (R.S.O. 1927, chap. 318, as amended by 1928, chap. 52), which make it obligatory upon the officer to effect general seizure of articles "found in the possession of" any person deemed to have committed an offence.

(*d*) Better recognition of the serious nature of game-law infractions when under prosecution.

51. There should be friendly co-operation between field officers and the public so that an atmosphere of suspicion may be avoided, and in order that public opinion may be developed in the direction of confirming authorized privileges and of detecting or warning offenders.

52. Efforts should be made to do away with the licensing of unqualified guides and the signification thereby implied of Government approval, which is misleading and deceptive to prospective employers. A constructive policy should be gradually elaborated so that the guides of Ontario will constitute a select body of men, known by local reference or otherwise to be of good character proficient in handling boats, and acquainted with the local waters.

53. The formation of Guides' Associations should be actively encouraged because of the advantages which may be expected to result from local comparison of qualifications and the elimination of undesirables.

54. The value of local fish, game, forest, conservational or trades associations should be recognized for the assistance they can render locally to the protective service through the overseers and other officers.

55. Local associations should not only be encouraged to formulate and submit their constitutions as an assurance both of their intentions and the obligations imposed upon their members, but should receive active assistance of the nature of information as to what the Government is trying to do along service lines, information as to available literature and public lectures on conservational subjects, and such other assistance as will enable them to maintain and develop local interest. They should also be invited to submit recommendations concerning matters of local advantage.

56. Special attention should be given to perfecting the mechanism of issue, and information concerning the method of procuring non-resident licenses, along the following lines:—

(*a*) Provision of service at Customs ports.

(*b*) Re-consideration of the advisability of permitting licenses to be issued by tradesmen.

(*c*) Re-consideration of the former practice of having licenses issued by officers.

(*d*) Posting of notices regarding non-resident licenses in all places where licenses are issued and in all hotels, camps, tourist trade offices and other convenient places frequented by non-resident visitors.

57. An agreement should be sought as between the Province of Ontario on the one hand and the Provinces of Quebec and Manitoba on the other by

which, in the case of each province, the non-resident angling license would not be required of citizens of the immediately adjacent Province for fishing in waters traversed by the interprovincial boundary.

58. A resident rod license, with minimum age limit at which applied, should be established in Ontario when the need of additional revenue to be applied exclusively to game-fish protection, propagation and similar service shall have been demonstrated.

59. The organization of the scientific technical service of the Department of Game and Fisheries should be greatly extended.

60. In view of the increasing importance of scientific research as applied to the solution of economic fisheries problems, and the existence of several agencies capable of assisting in this direction, including therewith the Ontario Fisheries Research Laboratory of the Provincial University, various scientific laboratories of the universities of the Province, the Ontario Research Foundation, the Biological Board of Canada, and the Research Council of Canada, it is recommended that conferences be arranged in the near future looking to the formulation of a plan by which these various agencies may be brought into helpful co-operation as regard problems pertaining to this Province.

61. Because of the greatly increased and rapidly expanding requirements of game-fish service, more especially in relation to present and prospective volume of tourist trade, there should be a very extensive revision upwards of the scale of expenditure as applied to the work of those branches of the Department of Game and Fisheries immediately concerned. Serious consideration should also be given to present and prospective sources of revenue necessary to the purpose.

62. The limitations of the existing hatcheries of the Province in respect of the hatching and rearing of trout should be recognized, and efforts made to bring about improvement along the following lines:—

(*a*) Provision of at least two new hatchery sites mainly serving the lower part of the Province.

(*b*) Selection of these sites on the basis of physical and chemical suitability of the water sufficiency of volume and flow for present and future requirements, absolute control of spring sources, provision of sufficient land for future extensions, and proper gradients.

(*c*) Liberal provision for rearing ponds, and where necessary for retaining ponds.

(*d*) Investigation of the practicability of establishing and operating similar hatcheries with rearing ponds attached in the more northerly part of the Province, more especially with reference to North Bay, Sault Ste. Marie and Port Arthur or Fort William as local centres.

63. In view of prospective difficulties, the provision of satisfactory sources of artificial and natural food supply for rearing trout and other game-fishes should be recognized as a problem demanding special investigation.

64. A definite plan should be formulated looking to the re-establishment of speckled trout in the streams of the older settled, southern portion of the Province.

65. In obtaining stocks of eggs from which trout are to be hatched for re-stocking purposes, preference should be given to local supply for local planting.

66. Planting of brown and "rainbow" trout should continue to be held more or less in abeyance until information is fully available as to re-establishment of native species, the effects of these varieties upon native species, and the behaviour of the stocks, especially of "rainbow" trout already planted. An exception

should be made of the waters of the Lake Superior region where "rainbows" are already established and generally appreciated.

67. Efforts should be made to develop more rapidly the service arrangements for propagation and re-stocking as applied to small-mouthed black bass, and to some extent to large-mouthed bass along the following lines:—

(*a*) Renovation of the Mount Pleasant bass ponds.

(*b*) Construction of at least two new sets of ponds for small-mouthed bass, and one set of ponds for large-mouthed bass in the lower part of the Province.

(*c*) Selection of sites, either separately or in combination with trout hatchery sites, on the basis of requirements for the most part, as previously stated for trout.

(*d*) Separate maintenance and operation of ponds for bass as opposed to trout.

(*e*) Production of late fingerlings under proper conditions of pond space, and food.

(*f*) Such development of retaining ponds as will ensure moderate supplies of parent fish.

(*g*) Investigation of the practicability of constructing and operating artificial bass ponds to servce the north shore of Lake Huron and other regions westward, especially in the districts of Kenora and Rainy River.

(*h*) Reservation of a large number of Government owned or controlled sanctuaries for the supply of young of adult fish for re-stocking purposes.

(*i*) Immediate and aggressive application of the principle of local closure in order to provide opportunity for growth in waters otherwise overfished.

(*j*) Special consideration of ways and means of successfully re-stocking the older continuously fished waters, including Lake Simcoe, Georgian Bay, Muskoka Lakes, parts of the Trent and Rideau systems and geographically related or easily accessible waters of the southern Lake Ontario or St. Lawrence section.

68. In view of protests and representations that have been made on behalf of certain sections of the Province in respect of June and October fishing for black bass, and the importance of adjusting this difficulty, it is recommended that the open season should be considered on the basis of allowing fishing from July 1st to October 14th, or 106 days, with such later reduction as may be necessary.

The reasons advanced in favour of this recommendation are stated in Sections 72-74 which must be read in conjunction with Sections 75-79 and with the Dominion regulation permitting June fishing for yellow pickerel.

69. The total number of days during which bass fishing may be permitted is at the present time a relatively more important issue than that implied in merely covering by means of a spring close season the natural requirements of spawning.

70. The sole significance of the date of fall closing for bass consists in the advantage to be expected from controlling the amount of fishing.

71. The economic importance and local convenience of having at least one species of game-fish or substitutive fish—trout, maskinonge, pickerel, or pike—available for early summer fishing, should be recognized in contrast to the loss and inconvenience resulting from the complete prohibition of game-fishing in most waters of Ontario to a date as far along as July 1st.

72. In view of protests and representations that have been made on behalf of certain sections of the Province in respect of June and October fishing for maskinonge, and the importance of adjusting this difficulty, it is recommended that the open season should be considered on the basis of allowing fishing from June 16th to October 14th, or 120 days (cf. Sections 71-74 and Sections 76-79).

73. The question of the number of days during which maskinonge fishing may be permitted has little or no reference to protection during the spawning period, provided the open season does not begin, approximately or on the average, earlier than the middle of June.

74. The significance of the date of fall closing consists in the advantage to be expected from controlling the total amount of fishing in contrast to the attractiveness and value of October fishing.

75. Even with a restriction of capture to two maskinonge per day it is probable that in the not distant future, reduction of the number of days of fishing will have to be effected, either through shortening in spring or fall, or closing through a part of the less desirable summer fishing period.

76. Closure of waters formerly containing maskinonge in abundance and now depleted should be insisted upon if re-stocking is undertaken, whether by local request or otherwise.

77. Artificial propagation of maskinonge should be rapidly developed in the southern part of the Province with the especial object of serving the waters of the Trent system and providing where necessary for other waters in which maskinonge were formerly abundant or are now locally desired.

78. In order to cover the requirements of certain waters in which pike are important from the game-fishing or tourist standpoint, pike should have a game-fish or semi-game-fish rating with adequate provision of legal restrictions as to close season, number and minimum size. These restrictions should either be locally applied, or generally applied and locally removed, in order to provide for free capture or for Government removal of pike in the interest of more favoured game-fisher.

79. Lake trout should have a game-fish or semi-game-fish rating which would recognize restriction of capture to angling in waters where game-fish interest predominates, with provision for close season protection whether on the basis of commercial fishing or of angling, in addition to present restrictions.

80. Special attention should be given to the re-stocking requirements of certain inland waters in which lake trout are relied upon for summer game-fishing.

81. The commercial fishing line extending along the main or northwest shore of Georgian Bay should be re-drawn some five miles off shore with the object of establishing a game-fishing area adequate in extent to the importance of summer resident populations on the main shore and islands, of affording greater protection to spawning fish in a part of the Great Lakes pre-eminently Canadian, and of restricting inshore net fishing and disposal of fish to operations conducted under Government supervision.

82. Yellow pickerel should have a game-fish or semi-game-fish rating which would recognize restriction of capture to angling in waters where game-fish interest predominates, with provision for complete close season protection whether on the basis of commercial fishing or angling, and with possible further reduction in maximum number per day in addition to the present restrictions.

83. Artificial propagation and re-stock as applied to pickerel for game-fishing purposes should be more rapidly developed along the following lines:—

(*a*) Re-stock or supplying waters in which bass or maskinonge have become depleted.

(*b*) Special attention to waters having a large summer resident population.

(*c*) Investigation of methods used in planting and probable results of former plantings in exclusively game-fish waters.

84. As a counterbalance to the centralization of authority in the tendency to prescribe regulations in the interests of uniformity rather than of local applicability, greater attention should be given to the requirements of local situations, especially along the following lines:—

(*a*) Assistance in various ways to local associations.

(*b*) Technical investigation of local game-fishing possibilities, including climatic and geographical differences worthy of legislative differentiation.

(*c*) Economic survey of present and prospective relations of local centres to industrial development, transportation and tourist trade as applied to the extent and differences of game-fish requirement and to local regulation.

F. G. Macdiarmid, *Chairman.*
C. N. Candee.
B. A. Bensley.

March 25th, 1930.

Ninth Annual Report

OF THE

Mothers' Allowances Commission

FOR THE YEAR

1928-1929

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO

SESSIONAL PAPER No. 37, 1930

ONTARIO

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1930

PRODUCED BY
The
United Press
LIMITED
TORONTO
CANADA

TO HIS HONOUR WILLIAM DONALD ROSS,
Lieutenant-Governor of the Province of Ontario.

MAY IT PLEASE YOUR HONOUR:

I have the pleasure to present herewith the Ninth Annual Report of the Mothers' Allowances Commission, for the year 1928-1929.

Respectfully submitted,

FORBES GODFREY,
Minister of Health and Labour.

COMMISSION

Honourable David Jamieson, M.D., M.C.P.S., *Chairman.*

Miss Belle Thompson, *Vice-Chairman.*

Mrs. Minnie Singer.

Lieutenant-Colonel T. J. Murphy, K.C.

Mr. A. J. Reynolds.

Ninth Annual Report

OF THE

Mothers' Allowances Commission

For the Year 1928-1929

The Commission herewith begs to submit its report for the year ending 31st October, 1929. From this it will be noticed there has been approximately the same rate of increase in the number of beneficiaries and also in the amount expended.

The number of mothers now receiving assistance is 5,324, being an increase of 220 over the number one year ago, and the amount paid out has increased from $2,190,407 to $2,306,083. At the same time the percentage of cost of administration has again shown a decrease, now standing at 3.46 per cent. for the past year.

One of the most serious problems we have to deal with is the case of deserted mothers, and if funds could be provided to bring back deserters from the United States, where most of them go, and if action were taken against them, after the manner employed by Judge McKinley of Ottawa, we might obtain results that would materially reduce the number of beneficiaries in this category.

On account of the increasing number of beneficiaries and the need for more careful supervision, the investigators are having rather a strenuous task to efficiently carry on their work, each one having an average of about 300 mothers in their district. It will be necessary to have more assistance by increasing the number, as we find by making enquiries from other provinces and from states in the neighbouring republic that none of their investigators have nearly the numbers under their care as we have in Ontario.

Our new offices at 43 Queen's Park are now equipped and fully occupied, especially as the Old Age Pension Act is being administered from the same place. This, of necessity, entails considerable overlapping in the work of the office staff, but under these conditions, with many of our officers doing work for both Commissions, there is large saving in the costs of administration of both Acts.

The Local Boards continue giving most valuable assistance in dealing with cases in their various districts and their hearty co-operation has enabled the work to be carried on in such a way as to obtain the best results and with very little real grounds for complaint from any source.

Our investigators and the office staff are deserving of every consideration for the careful, efficient and sympathetic manner in which they have carried on their various duties.

The Commission desires to express its appreciation of the sympathetic assistance and co-operation which it has received from Honourable Dr. Forbes Godfrey, Minister of Health and Labour.

Signed on behalf of the Commission,

D. Jamieson,
Chairman.

SECRETARIAL REPORT

Monthly sessions of the Commission were held during the year, at which business as undernoted was transacted:

Allowances:	
Granted	1,173
Reinstated	216
Increased	417
Decreased	1,105
Cancelled	939
Suspended	194
Applications:	
Deferred	174
Judged Ineligible	339
Reviewed	960
	5,517

MONTHLY PAYMENTS TO BENEFICIARIES

	Number of Beneficiaries	Increase over Previous Month	Amount Disbursed	Increase over corresponding month of previous year	
				Beneficiaries	Amount
November	5,118	*21	$186,566	385	$14,654
December	5,218	100	191,759	379	14,552
January	5,255	37	192,878	379	15,713
February	5,266	11	191,735	332	10,175
March	5,323	57	195,265	337	11,874
April	5,346	23	194,840	320	10,565
May	5,342	*4	194,535	296	6,860
June	5,347	5	195,535	239	8,223
July	5,343	*4	194,285	190	6,646
August	5,374	31	196,970	204	6,671
September	5,333	*41	193,570	140	4,064
October	5,359	26	196,450	220	8,514
		220	$2,324,388		$118,511
Less cheques returned to Provincial Treasury Department for cancellation			18,305		2,835
			$2,306,083		$115,676

*Decrease.

COMPARATIVE STATEMENT

Year	Number of Beneficiaries	Amount Disbursed
1928-1929	5,359	$2,306,083
1927-1928	5,139	2,190,407
Net increase	220	115,676
Average monthly increase	18.33	$9,639.66

SUMMARY OF ALLOWANCES PAID

Number of Beneficiaries	Counties	Amount Disbursed	Less Cancelled Cheques		Adjustments			Refunds Cr.
					Residence		Lacking Residence Cr.	
					Dr.	Cr.		
		$	$	$	$	$	$	$
31	Brant	10,850	120	10,730				
41	Bruce	14,845	120	14,725	15		95	940
56	Carleton	21,735	270	21,465			440	
19	Dufferin	7,185	200	6,985				
25	Elgin	10,530	100	10,430				
68	Essex	29,835	265	29,570		95		
15	Frontenac	5,525	85	5,440				
73	Grey	26,600	275	26,325			100	
35	Haldimand	12,385	155	12,230				
16	Haliburton	4,535		4,535			330	
35	Halton	13,860	135	13,725			60	
59	Hastings	20,710	135	20,575		20	255	
55	Huron	20,660	115	20,545				
42	Kent	16,399	130	16,269			150	
20	Lambton	7,185		7,185				
36	Lanark	14,130	150	13,980	60			
25	Leeds	10,105	40	10,065				
25	Grenville	9,300		9,300				
21	Lennox-Addington	7,015	30	6,985		75		
46	Lincoln	17,565	145	17,420	40		90	
54	Middlesex	20,330	145	20,185				
30	Norfolk	11,205		11,205				
44	Northumberland	16,265	235	16,030				
32	Durham	12,660		12,660			170	
35	Ontario	15,305	160	15,145			170	
30	Oxford	11,305	160	11,145				
28	Peel	11,150	45	11,105				
17	Perth	6,616	65	6,551				
38	Peterborough	13,759	95	13,664				
56	Prescott	25,165	180	24,985				
65	Russell	25,280		25,280				45
24	Prince Edward	9,190	60	9,130				140
144	Renfrew	58,300	345	57,955			140	
155	Simcoe	63,812	450	63,362			175	
76	Stormont	32,060	345	31,715				
22	Dundas	9,330		9,330			40	705
38	Glengarry	14,920		14,920				
52	Victoria	20,100	135	19,965	15		40	
56	Waterloo	21,470	135	21,335			140	
65	Welland	26,236	315	25,921		255	300	
28	Wellington	10,895	170	10,725			20	
38	Wentworth	15,830	160	15,670		275		
299	York	112,480	1,025	111,455	15	150	60	1,040
2169	Sub-total	844,617	6,695	837,922	145	870	2,775	2,870
	Towns							
18	Brockville	8,135	140	7,995				
6	Gananoque	2,710		2,710		60		
10	Ingersoll	3,915		3,915				
1	Pelee Island	360		360				
7	Prescott	3,210	50	3,160				
6	Smith's Falls	2,785	30	2,755				
5	St. Mary's	2,040		2,040				
10	Trenton	4,590	35	4,555				
14	Walkerville	5,380	45	5,335				
23	Indian Reserve	7,995	240	7,755	20		30	
100	Sub-total	41,120	540	40,580	20	60	30	

DURING FISCAL YEAR, 1928-1929

Net Amount	Fifty Per Cent. Chargeable to Municipalities	Amount Outstanding 31st October, 1928	Amount Due by Municipalities	Amount Received from Municipalities	Amount Outstanding 31st October, 1929
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
10,730	5,365 00	460 00	5,825 00	5,387 50	437 50
13,705	6,852 50	595 00	7,447 50	6,835 00	612 50
21,025	10,512 50	712 50	11,225 00	10,272 50	952 50
6,985	3,492 50	275 00	3,767 50	3,217 50	550 00
10,430	5,215 00	415 00	5,630 00	5,252 50	377 50
29,475	14,737 50	1,290 00	16,027 50	14,887 50	1,140 00
5,440	2,720 00	272 50	2,992 50	2,772 50	220 00
26,225	13,112 50	1,037 50	14,150 00	13,045 00	1,105 00
12,230	6,115 00	8 55	6,106 45	5,591 45	515 00
4,205	2,102 50	125 00	2,227 50	1,782 50	445 00
13,665	6,832 50	545 00	7,377 50	6,870 00	507 50
20,300	10,150 00	820 00	109 70	5,695 00	5,275 00
20,545	10,272 50	822 50	11,095 00	10,227 00	868 00
16,119	8,059 50	646 00	8,705 50	8,074 50	631 00
7,185	3,592 50	307 50	3,900 00	3,587 50	312 50
14,040	7,020 00	627 50	7,647 50	7,057 50	590 00
10,065	5,032 50	792 50	5,825 00	9,690 00	785 00
9,300	4,650 00	....	4,650 00	....	....
6,910	3,455 00	257 50	3,712 50	3,402 50	310 00
17,370	8,685 00	705 00	9,390 00	8,615 00	775 00
20,185	10,092 50	877 50	10,970 00	10,115 00	855 00
11,205	5,602 50	467 50	6,070 00	5,585 00	485 00
16,030	8,015 00	1,105 00	9,120 00	14,207 50	1,157 50
12,490	6,245 00	....	6,245 00	....	....
14,970	7,487 50	627 50	8,115 00	7,587 50	527 50
11,145	5,572 50	480 00	6,052 50	5,620 00	432 50
11,105	5,552 50	540 00	6,092 50	5,690 00	402 50
6,551	3,275 50	241 50	3,517 00	3,279 50	237 50
13,664	6,832 00	561 00	7,393 00	6,810 50	582 50
24,985	12,492 50	1,905 00	14,397 50	24,870 00	2,145 00
25,235	12,617 50	....	12,617 50	....	....
8,990	4,495 00	627 50	5,122 50	4,732 50	390 00
57,815	28,907 50	2,260 00	31,167 50	26,432 50	4,735 00
63,187	31,593 50	2,610 50	34,204 00	31,731 50	2,472 50
30,970	15,485 00	2,162 50	17,647 50	27,355 00	2,417 50
9,330	4,665 00	....	4,665 00	....	....
14,920	7,460 00	....	7,460 00	....	....
19,940	9,970 00	822 50	10,792 50	9,947 50	845 00
21,195	10,597 50	860 00	11,457 50	10,622 50	835 00
25,366	12,683 00	931 50	13,614 50	12,593 00	1,021 50
10,705	5,352 50	852 50	6,205 00	5,767 50	437 50
15,395	7,697 50	825 00	8,522 50	7,905 00	617 50
110,220	55,110 00	4,252 50	59,362 50	54,665 00	4,697 50
831,552	415,776 00	33,706 95	449,482 95	407,779 95	41,703 00
7,995	3,997 50	285 00	4,282 50	3,852 50	430 00
2,650	1,325 00	120 00	1,445 00	1,350 00	95 00
3,915	1,957 50	165 00	2,122 50	1,927 50	195 00
360	180 00	15 00	195 00	180 00	15 00
3,160	1,580 00	237 50	1,817 50	1,610 00	207 50
2,755	1,377 50	137 50	1,515 00	1,332 50	182 50
2,040	1,020 00	82 50	1,102 50	1,017 50	85 00
4,555	2,277 50	167 50	2,445 00	2,257 50	187 50
5,335	2,667 50	215 00	2,882 50	2,427 50	455 00
7,745	3,872 50	345 00	4,217 50	3,920 00	297 50
40,510	20,255 00	1,770 00	22,025 00	19,875 00	2,150 00

SUMMARY OF ALLOWANCES PAID

	COUNTIES	Amount Disbursed	Less Cancelled Cheques		ADJUSTMENTS			Refunds Cr.
					Residence		Lacking Residence Cr.	
					Dr.	Cr.		
		$	$	$	$	$	$	$
	Cities							
27	Belleville........	11,770	25	11,745	......	......	....	....
68	Brantford........	32,415	490	31,925	......	......	150	....
22	Chatham.........	10,330	135	10,195	......	......	....	....
28	Fort William......	14,397	325	14,072	......	......	22	....
24	Galt............	12,180	200	11,980	......	......	....	....
36	Guelph..........	16,015	75	15,940	......	......	180	....
261	Hamilton........	123,015	960	122,055	240	85	400	1,075
51	Kingston........	24,465	40	24,425	60	......	....	....
36	Kitchener........	17,510	155	17,355	......	50	....	1,955
134	London..........	61,070	290	60,780	......	......	40	940
20	Niagara Falls.....	8,895	85	8,810	......	......	....	....
37	North Bay.......	17,275	235	17,040	......	......	....	....
36	Oshawa..........	14,540	200	14,340	......	......	120	....
311	Ottawa..........	151,360	620	150,740	......	......	350	160
30	Owen Sound......	14,050	65	13,985	......	......	....	....
51	Peterborough.....	25,359	445	24,914	......	......	....	23
38	Port Arthur......	18,725	35	18,690	......	......	....	....
19	Sarnia...........	9,235	100	9,135	......	......	....	....
26	Sault Ste. Marie...	13,595	105	13,490	......	......	525	....
37	Stratford.........	16,645	105	16,540	......	......	....	....
61	St. Catharines....	27,010	235	26,775	......	40	415	....
29	St. Thomas.......	12,550	100	12,450	......	......	....	....
1111	Toronto..........	535,270	3,955	531,315	845	430	2,030	180
27	Welland..........	12,740	....	12,740	60	......	285	....
28	Windsor..........	28,505	380	28,125	......	......	225	....
14	East Windsor.....	2,540	....	2,540	95	......	....	....
13	Woodstock.......	5,785	....	5,785	......	......	....	....
2575	Sub-total......	1,237,246	9,360	1,227,886	1,300	605	4,742	4,333
4844	Sub-total.......	2,122,983	16,595	2,106,388	1,465	1,535	7,547	7,203
	Districts							
25	Algoma..........	10,865	180	10,685	......	......	....	....
17	Kenora..........	6,830	95	6,735	......	......	....	....
16	Manitoulin.......	7,090	60	7,030	......	......	....	....
36	Muskoka.........	16,025	250	15,775	......	......	....	....
85	Nipissing.........	36,450	160	36,290	......	......	....	....
46	Parry Sound......	20,250	175	20,075	......	......	....	....
18	Rainy River......	6,620	....	6,620	......	......	....	....
83	Sudbury..........	35,610	210	35,400	......	......	....	13
139	Timiskaming......	56,215	495	55,720	......	......	....	....
15	Thunder Bay.....	5,450	85	5,365	......	......	....	....
480	Sub-total.......	201,405	1,710	199,695	......	......	....	13
5324	Totals.........	2,324,388	18,305	2,306,083	1,465	1,535	7,547	7,216
	Province							
	Residence adjustments..........	....	....	....	70	......	....	....
	Lacking residence..	....	....	....	7,547	......	....	....
	Refunds..........	....	....	....	7,216	......	....	....
		2,324,388	18,305	2,306,083	16,298	1,535	7,547	7,216

DURING FISCAL YEAR, 1928-1929—*Continued.*

Net Amount	Fifty Per Cent. Chargeable to Municipalities	Amount Outstanding 31st October, 1928	Amount Due by Municipalities	Amount Received from Municipalities	Amount Outstanding 31st October, 1929
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
11,745	5,872 50	492 50	6,365 00	5,830 00	535 00
31,775	15,887 50	1,360 00	17,247 50	16,005 00	1,242 50
10,195	5,097 50	477 50	5,575 00	5,125 00	450 00
14,050	7,025 00	620 00	7,645 00	7,122 50	522 50
11,980	5,990 00	527 50	6,517 50	6,092 50	425 00
15,760	7,880 00	612 50	8,492 50	7,775 00	717 50
120,735	60,367 50	4,450 00	6,481 50	59,642 50	5,175 00
24,485	12,242 50	995 00	13,237 50	12,252 50	985 00
15,350	7,675 00	1,332 50	9,007 50	7,620 00	1,387 50
59,800	29,900 00	2,255 00	32,155 00	29,455 00	2,700 00
8,810	4,405 00	345 00	4,750 00	4,395 00	355 00
17,040	8,520 00	602 50	9,122 50	8,375 00	747 50
14,220	7,110 00	507 50	7,617 50	6,832 50	785 00
150,230	75,115 00	12,700 00	87,815 00	81,490 00	6,325 00
13,985	6,992 50	597 50	7,590 00	7,047 50	542 50
24,891	12,445 50	958 50	13,404 00	12,389 50	1,014 50
18,690	9,345 00	785 00	10,130 00	9,332 50	797 50
9,135	4,567 50	365 00	4,932 50	4,550 00	382 50
12,965	6,482 50	632 50	7,115 00	6,627 50	487 50
16,540	8,270 00	650 00	8,920 00	8,152 50	767 50
26,320	13,160 00	920 00	14,080 00	12,960 00	1,120 00
12,450	6,225 00	495 00	6,720 00	5,650 00	1,070 00
529,520	264,760 00	49,830 00	314,590 00	305,628 00	8,962 00
12,515	6,257 50	427 50	6,685 00	6,170 00	515 00
27,900	13,950 00	867 50	14,817 50	13,600 00	1,217 50
2,635	1,317 50	....	1,317 50	1,040 00	277 50
5,785	2,892 50	242 50	3,135 00	2,895 00	240 00
1,219,506	609,753 00	84,048 50	693,801 50	654,055 00	39,746 50
2,091,568	1,045,784 00	119,525 45	1,165,309 45	1,081,709 95	83,599 50
10,685	5,342 50	....	....	....	....
6,735	3,367 50	....	....	....	....
7,030	3,515 00	....	....	....	....
15,775	7,887 50	....	....	....	....
36,290	18,145 00	....	....	....	....
20,075	10,037 50	....	....	....	....
6,620	3,310 00	....	....	....	....
35,387	17,693 50	....	....	....	....
55,720	27,860 00	....	....	....	....
5,365	2,682 50	....	....	....	....
199,682	99,841 00	....	....	....	....
2,291,250	1,145,625 00	....	....	....	....
70	35 00	....	....	....	....
7,547	3,773 50	....	....	....	....
7,216	3,608 00	....	....	....	....
2,306,083	1,153,041 50	....	....	....	....

FINANCIAL STATEMENT

Amount appropriated for the payment of allowances	$2,380,000
Amount expended	2,306,083
Unexpended balance	$73,917

The amount expended was disbursed in:

		Less cancelled cheques	
Counties	$844,617	$6,695	$837,922
Cities	1,237,246	9,360	1,227,886
Separated Towns	33,125	300	32,825
Indian Reserves	7,995	240	7,755
Judicial Districts	201,405	1,710	199,695
	$2,324,388	$18,305	$2,306,083

Of the amount disbursed, $1,045,784 was charged to municipalities, and the balance of $1,260,99 to the Province:

Municipalities:	
Counties	$415,776 00
Cities	609,753 00
Separated Towns	16,382 50
Federal Department of Indian Affairs	3,872 50
	$1,045,784 00
Province:	
50 Per cent. of amount disbursed in Municipalities	$1,045,784
100 Per cent. of amount disbursed in Judicial Districts	199,682
100 Per cent. of allowances to beneficiaries lacking one year's continuous residence in a municipality	7,547
Residence adjustments	70
Refunds credited to Municipalities	7,203
Refunds credited to Districts	13
	$1,260,299

Amount expended in Mothers' Allowances since November 1st, 1920, to October 31st, 1929:

Year Ending October 31st:		
1921	$774,667	
1922	1,382,138	
1923	1,612,701	
1924	1,715,205	
1925	1,790,680	
1926	1,886,095	
1927	2,017,614	
1928	2,205,877	
1929	2,324,388	
		$15,709,365 00
Less cancelled cheques		80,392 00
		$15,628,973 00
Amount received from Municipalities		6,721,067 50
		$8,907,905 50
Less Amount due by Municipalities at 31st October, 1929		84,048 50
Net cost to Province for the nine-year period		$8,823,857 00

REVENUE STATEMENT

Receipts for the year totalling $1,100,275.95 were deposited with the Provincial Treasurer, and credited as follows:

Counties	$407,779 95	
Cities	654,055 00	
Separated Towns	15,955 00	
Federal Department of Indian Affairs	3,920 00	
		$1,081,709 95
Miscellaneous:		
Miscellaneous revenue	$1,600 00	
Casual revenue	955 00	
		2,555 00
Refunds:		
Expenditure	$2,200 00	
Federal pensions	9,400 00	
Beneficiaries	4,411 00	
		16,011 00
		$1,100,275 95

ADMINISTRATION EXPENSE

Although disbursements are greater, the cost of administration again shows a slight decrease over the previous year, being 3.46 per cent. as compared with 3.5 per cent.

STATISTICAL REPORT, YEAR 1928–29

STATEMENT REGARDING ALL BENEFICIARIES ON THE ALLOWANCE PAY LIST DURING THE YEAR ENDING OCTOBER 31st, 1929

Number of beneficiaries on allowance list, October 31st, 1928	5,139
" " " " October 31st, 1929	5,357
Increase of beneficiaries during fiscal year	216 or 4.24%
Number of beneficiaries on allowance list, October 31st, 1929	5,357
" " " " part of year but later cancelled	1,054
	6,411
Number of applications declared ineligible	375

Causes of Dependency	Number of Families		Number of Children	
Death of father (widow)		4,503		13,145
Incapacitation:				
(*a*) Insanity (husband in asylum)	167		531	
(*b*) Other causes	1,076		3,261	
		1,243		3,792
Desertion		407		1,045
Death of both parents (foster mother)		258		623
		6,411		18,605

Number of Children in these Families	Number of families	Number of children
Families with 1 child and totally and permanently incapacitated husband or child over 16 years	148	148
“ “ 2 children under 16 years	3,145	6,290
“ “ 3 “ “ 16 “	1,563	4,689
“ “ 4 “ “ 16 “	814	3,256
“ “ 5 “ “ 16 “	420	2,100
“ “ 6 “ “ 16 “	191	1,146
“ “ 7 “ “ 16 “	87	609
“ “ 8 “ “ 16 “	26	208
“ “ 9 “ “ 16 “	12	108
“ “ 10 “ “ 16 “	4	40
“ “ 11 “ “ 16 “	1	11
	6,411	18,605

Rate of Allowance	Number of families		Number of children		Average number of children per family
City:					
Cities		3,123		8,591	2.75
County:					
Counties	2,596		7,728		
Judicial Districts	604	3,200	2,048	9,776	3.05
Town:					
Towns		88		238	2.70
		6,411		18,605	2.90

NATIONALITY BY BIRTH OF BENEFICIARIES

British:		
Canadian	4,132	
English	1,154	
Scottish	307	
Irish	178	
Other British	71	
		5,842
Others of Foreign Birth now Naturalized:		
American	117	
Russian	80	
Italian	88	
Polish	79	
Finnish	41	
Austrian	40	
German	13	
Swedish	14	
Galician	6	
Norwegian	8	
Others	83	
		569
		6,411

NATIONALITY BY PERCENTAGES

British:		
Canadian	64.45%	
Other British	26.67%	
		91.12%
Beneficiaries of foreign birth (naturalized)		8.88%
		100%

CAUSES OF CANCELLATION

One of two children now 16 years or not at school	476
Beneficiary remarried	136
Should be self-supporting	62
Unsatisfactory home conditions	86
Husband no longer totally and permanently incapacitated	73
Beneficiary no longer resident in Province of Ontario	25
Only one child or no children with the mother	32
Husband no longer in asylum	11
Beneficiary died	19
Now in possession of assets of a disqualifying amount	29
Now in receipt of allowance from other funds	23
Now in possession of disqualifying equity in property	6
Incapacitated husband died and only one child under 16 years	11
Voluntary withdrawal	11
Beneficiary in an institution	2
Incapacitated husband no longer in care of wife and only one child under 16 years	20
Residence of husand now known (desertion cases)	6
Address of beneficiary not known	26
	1,054

CAUSES OF INELIGIBILITY

Value of property or other assets disqualify	103
Applicant's husband or child over 16 years of age not totally and permanently incapacitated	40
Not eligible under desertion clause	38
Only one child under 16 years of age in attendance at school	33
Residence requirements not fulfilled	22
Unsatisfactory home conditions	22
Sufficient income to maintain the home	34
Children not with mother	8
In receipt of allowance from other funds	8
Applicant not a British subject	4
Applicant divorced or legally separated	1
Foster-mother applications ineligible as children not orphans	7
Only one child under 16 years of age and incapacitated husband not in wife's care	4
Applicant's husband in prison	5
Qualifying child not born under lawful wedlock	1
Application withdrawn	3
Deferred for further information	42
	375

O. G. Clarke,
Statistician.

LOCAL BOARDS

(Those marked * are municipal nominees)

COUNTIES

Brant	Chairman, Mr. J. P. McCammon, Paris. Vice-Chairman, Mrs. G. T. Wood, Grandview. Secretary, Mrs. Wm. Kerr, St. George. *Mr. E. A. Standing, Burford. Mrs. Herbert Burtch, R.R. No. 1, Scotland.
Bruce	*Chairman, Mr. D. J. Byers, Reeve, Wiarton. Secretary, Mrs. I. Shoemaker, Paisley. Mrs. F. E. Coombe, Kincardine. Rev. R. Perdue, Walkerton. *Mr. Robert McVittie, Southampton. Mr. W. Brooks, J.P., Parkhead.
Carleton	Chairman, Mr. J. E. Caldwell, City View P.O. *Vice-Chairman, Mrs. J. A. Heney, Westborough. Secretary, Rev. J. H. Woodside, Kenmore. Mrs. E. T. Coldry, Cummings Bridge. *Mr. Wm. Joynt, Laurentian View.
Dufferin	*Chairman, Mr. T. J. Henderson, Orangeville. *Secretary, Mrs. W. C. Dahl, Orangeville. Mr. Hugh Falconer, Shelbourne. Mr. H. F. Tuck, Orangeville. Mrs. Dr. Berwick, Grand Valley...
Dundas	Chairman, Mr. Wesley Hamilton, Chesterville. Secretary, Mrs. James Hughes, Chesterville. *Mr. Charles Marcellus, Dunbar. Mrs. Ezra Summers, Winchester. Mr. Arthur Flynn, Morrisburg. *Mrs. A. B. Allison, Morewood.
Durham	*Chairman, Mr. F. W. Galbraith, Port Hope. *Mrs. Arthur Van Camp, Burketon. Secretary, Mrs. A. L. Nicholls, Bowmanville. Mr. Harry Bland, R.R. No. 2, Ida. Mr. C. J. Thornton, Orono. Mr. T. B. Chalk, Port Hope.
Elgin	Chairman, Mr. R. A. Penhale, R.R. No. 8, St. Thomas. Vice-Chairman, Mrs. C. S. Bridgman, Aylmer. Secretary, Mrs. B. B. Graham, Rodney. *Mrs. S. S. McDermand, R.R. No. 1, Port Burwell. *Mr. D. A. McNabb, Dutton.
Essex	*Chairman, Mr. Judson Scratch, Kingsville. *Vice-Chairman, Mrs. Severin Ducharme, Belle River. Secretary, Mrs. George Elliott, Brock St., Sandwich. Mr. W. P. Coyle, Sandwich. Mr. Maurice Renaud, Tecumseh. Mrs. R. R. Brett, Essex.
Frontenac	Chairman, Mr. J. W. Bradshaw, County Clerk, Kingston. Secretary, Mrs. J. L. F. Sproule, Westbrook. Mr. Chas. Truscott, Sydenham. Mrs. J. D. Shibley, Harrowsmith. *Mrs. Fred Ferguson, Inverary. *Mr. James Parker, Mountain Grove.
Glengarry	*Chairman, Mr. A. J. Robertson, Martintown. Secretary, Mrs. A. H. Robertson, Maxville. Mrs. A. MacNaughton, Alexandria. Mr. William Blyth, R.R. No. 1, Maxville. Mr. R. J. Pattengale, Lancaster. Mr. Allen Peter McDonald, Summerstown Station. Mr. J. W. McLeod, R.R. No. 2, Dalkeith. *Mr. D. Robertson, Glen Robertson. Mrs. Oscar Gareau, Alexandria.
Grenville	Chairman, Mr. Joseph Goodin, Roebuck. Vice-Chairman, Mr. A. E. Langstaff, Kemptville. *2nd Vice-Chairman, Mr. J. Harold Kidd, Burritts Rapids. Secretary, Mrs. J. A. Connell, Algonquin. *Mr. W. P. Walker, Cardinal.

LOCAL BOARDS—*Continued*

(Those marked * are municipal nominees)

COUNTIES—*Continued*

GREY	Chairman, Mr. Herbert C. Brigham, Hanover. Vice-Chairman, Mrs. B. J. Long, Meaford. *Secretary, Mrs. Wm. Dingwall, Hopeville. *Mr. A. E. Colgan, Markdale. Mr. John Mills, Hanover. Mr. W. J. Miller, Bognor.
HALDIMAND	*Chairman, Mr. Harrison Arrell, K.C., Caledonia. Secretary, Mrs. Joseph Peart, Cayuga. Mrs. E. Kelly, Dunnville. *Mr. W. J. Saunders, Jarvis. Mr. S. E. Lindsay, Hagersville.
HALIBURTON	Chairman, Mrs. George Potts, Haliburton. *Secretary, Mr. H. B. Feir, Haliburton. *Mr. W. R. Curry, Haliburton. Mr. John Pearson, Haliburton. Mrs. Wm. Nichol, Haliburton.
HALTON	Chairman, Mr. E. F. Earl, Milton. *Secretary, Mr. George W. Cleave, R.R. No. 1, Norval. Mrs. J. R. Elliott, Milton. Mr. W. J. Morden, Oakville. Mrs. Malcolm McLean, Acton. *Mr. J. W. Breckon, Burlington.
HASTINGS	Chairman, Mr. Alexander Moore, 160 George St., Belleville. *Vice-Chairman, Mrs. Chas. Vanderwater, Foxboro (R.R.). *Secretary, Mr. W. H. Nugent, 230 Church St., Belleville. Mrs. Simeon Fox, Madoc. Mr. Thomas Montgomery, Stirling.
HURON	*Chairman, Mr. George W. Holman, Goderich. Secretary, Mr. A. T. Cooper, Clinton. Mrs. W. A. McKim, Goderich. Mrs. H. Fowler, Clinton. *Major R. S. Hays, Seaforth.
KENT	Chairman, Mr. John F. Fletcher, County Clerk, Chatham. (Acting Secretary) Vice-Chairman, Mrs. Archibald Pow, Ridgetown. Secretary, Mrs. Catherine McVean, Dresden (away). *Mr. John Vance, Thamesville. *Mr. A. A. Wilson, Tilbury.
LAMBTON	Chairman, Mr. L. W. Harkness, Mandaumin. Vice-Chairman, Mrs. Neil Grant, Becher. *Secretary, Mr. Fred Eastman, Arkona. *Mr. Thomas Burnley, Camlachie. Mr. Jos. Hackett, Petrolia.
LANARK	Chairman, Mr. Willard R. Knox, Carleton Place. Vice-Chairman, Mr. J. R. McDiarmid, Carleton Place. Secretary, Mrs. J. K. Kelly, Almonte. *Mrs. R. V. Fowler, Perth. *Mrs. Carrie Fields Robertson, Lanark. Mr. Daniel J. Hogan, R.R. No. 4, Perth. Mr. Peter McCallum (Warden), Almonte.
LEEDS	Chairman, Mr. Wm. Bracken, Seely's Bay. Secretary, Miss F. E. Lyons, Portland. *Mr. M. B. Holmes, Athens. *Mr. Omar Buell, Mallorytown. Mrs. R. G. Leggett, Newboro.
LENNOX AND ADDINGTON	Chairman, Mrs. Wesley Wagar, Centreville. *Vice-Chairman, Mrs. W. G. Swayne, Bath. *Secretary, Mr. W. G. Wilson, Napanee. Mr. John L. Smith, J.P., R.R. No. 2, Napanee. Mr. John A. Brown, Tamworth. Mr. Christie Kellar, R.R. No. 5, Napanee. *Mr. R. V. Campbell (Warden), Flinton.

LOCAL BOARDS—*Continued*

(Those marked * are municipal nominees)

COUNTIES—*Continued*

LINCOLN	Chairman, Mr. D. Moyer, R.R. No. 1, Vineland. *Secretary, Mr. Wm. Richardson, Merritton. *Mr. J. E. Masters, Niagara-on-the-Lake. Mrs. E. W. Fry, Vineland. Mrs. Jas. Hobden, Beamsville.
MIDDLESEX	*Chairman, Mr. John Stuart, County Clerk, London. Secretary, Miss Mary Grant, 110 Dundas St., London. *Mr. Allen McPherson, Glencoe. Mrs. Malcolm Gray, Komoka. Mr. J. H. Young, Parkhill.
NORFOLK	Chairman, Mr. E. D. Halliday, Simcoe. Vice-Chairman, Mr. Jas. Brayley, R.R. No. 2, Langton. *Secretary, Mrs. G. A. Smith, Box 229, Delhi. Mr. H. A. Carter, Simcoe. *Mrs. Rowena Blacklock, Port Rowan.
NORTHUMBERLAND	*Chairman, Mr. Nelson Stone, Campbellford. *Secretary, Mr. Edmund Quinn, Colborne. Mrs. M. E. Maybee, R.R. No. 6, Trenton. Mrs. Findlay Clark, Brighton. Mr. A. R. Dundas, Cobourg. Miss May McCaughey, Cobourg.
ONTARIO SOUTH	Chairman, Mr. Robert Thompson, Whitby. *Mrs. Malcolm Forsythe, Claremont. *Mr. Levi Ellins, Columbus. Mr. Albert W. Jackson, Whitby. Mr. Charles R. Stewart, Port Perry.
ONTARIO NORTH	*Chairman, Mr. John Wetheral, Cannington. Vice-Chairman, Mr. Henry Heavener, R.R. No. 1, Atherley. *Secretary, Mrs. J. K. McLennan, Beaverton. Mrs. S. S. Sharpe, Uxbridge. Mrs. Lawrence Cooper, R.R. No. 1, Washago.
OXFORD	*Chairman, Mr. Arden Cameron, Norwich. Vice-Chairman, Mrs. J. B. Reid, Tillsonburg. Secretary, Mr. A. E. Roth, Woodstock. Mrs. A. V. Tilson, Tillsonburg. *Mr. Herbert Longworth, Burgessville.
PEEL	Secretary and Chairman, Mr. T. W. Duggan, Brampton. Vice-Chairman, Mr. David Wilson, R.R. No. 2, Bolton. *Mrs. W. J. Hunter, R.R. No. 2, Brampton. *Mr. J. H. Pinchin, Clarkson. Mrs. John A. McLachlan, Alton.
PERTH	Chairman, Mr. William Martyn, Mitchell. *Vice-Chairman, Mrs. Millie Parker, 212 Ontario St., Stratford Secretary, Mr. Duncan MacVannel, St. Mary's. Mr. Wm. Scott, West Monkton. *Mrs. James Donaldson, Listowel.
PETERBOROUGH	Chairman, Col. R. E. Birdsall, Birdsall P.O. Vice-Chairman, Mr. Jno. McIntosh, R.R. No. 3, Peterborough. Secretary, Mrs. B. W. Squire, Norwood. *Mr. C. J. Darling, Warsaw.
PRESCOTT	Chairman, Mrs. James Ross, Hawkesbury. *Secretary, Mr. Elie O. Bertrand, L'Orignal. Mr. Felix Cadieux, Vankleek Hill. *Mrs. Denis Harbic, Hawkesbury. Mr. W. J. Duncan, Vankleek Hill.
PRINCE EDWARD	Chairman, Dr. George Whiteman, Picton. *Mr. D. W. Robinson, Consecon. Mrs. Frank Morden, Box 451, Picton. *Mr. Herbert Cooper, Woodrows P.O. Mrs. Edwya Morden, Picton. Mrs. S. J. Collier, Picton.

LOCAL BOARDS—*Continued*

(Those marked * are municipal nominees)

COUNTIES—*Continued*

RENFREW	Chairman, Dr. G. G. McNab, Renfrew. Vice-Chairman, Mr. Thos. McKibbon, Eganville. *Secretary, Miss Julia G. Mallon, Pembroke. *Mrs. Elizabeth Davidson, Beachburg. Mr. J. J. Neilson, Arnprior. Mr. Thomas Church, Arnprior.
RUSSELL	Chairman and Secretary, Rev. W. B. Morgan, Britannia. *Miss C. Longtin, Bourget. Mr. W. T. Erskine, Rockland. *Mr. Albert Emard (Notary), Embrun.
SIMCOE	Chairman, Mr. J. T. Simpson, Elmvale. Vice-Chairman, Mrs. John C. McMullen, Midland. *Secretary, Mr. D. H. Coleman, (Treasurer), Barrie. Mr. S. R. Gendron, Penetanguishene. Mr. Thos. McKnight, Cookstown. Mrs. H. E. Todd, Orillia. Mrs. Lorne Kenney, Collingwood. *Mr. Charles J. Gratix (Warden), Waubaushene.
STORMONT	Chairman, Mr. Rodolphe Danis, Cornwall. Vice-Chairman, Mrs. John Nephew, R.R. No. 1, Finch. Secretary, Mr. John Bolduc, 120 Lawrence Ave., Cornwall. *Mrs. W. M. Earle, Avonmore. Mrs. Simeon Eamon, Osnabruck Centre.
VICTORIA	Chairman, Mr. F. G. Perrin, Oakwood. Secretary, Mr. J. W. Lyons, 77 Peel St., Lindsay. *Mrs. A. Morrison, Kinmount. Mrs. George Murphy, R.R. No. 4, Lindsay. *Mr. W. C. Moore, Bobcaygeon.
WATERLOO	*Chairman, Mr. A. R. G. Smith, New Hamburg. Secretary, Mrs. Ralph Vance, 165 King St., East Kitchener. Mrs. J. J. Lowe, Hespeler. *Mr. Sam Rohr, Ayr.
WELLAND	Chairman, Mr. F. H. Gallinger, R.R. No. 3, Niagara Falls. Vice-Chairman, Miss J. M. O'Neil, Port Colborne. Secretary, Mrs. E. W. Tench, R.R. No. 3, Niagara Falls. *Mr. A. D. Damude (Warden), Fonthill. *Mr. J. R. Phillips (Reeve), R.R. No. 1, Fort Erie.
WELLINGTON	*Chairman, Mr. Herman Graef, Clifford. Vice-Chairman, Mr. J. A. Cockburn, R.R. No. 1, Puslinch. Secretary, Mrs. A. G. H. Luxton, Mount Forest. *Mr. James Beattie, Fergus.
WENTWORTH	Secretary, Mrs. Adam Inch, Mount Hamilton. Mrs. J. E. McDonough, Rockton. Mr. J. E. Peart (County Clerk), Hamilton. Mr. John Fry, Dundas. *Mr. J. Pickard (Warden), Ancaster. *Mr. F. P. Martin (Reeve), Sheffield.
YORK	Chairman, Rev. H. R. Young, Fairbank. Vice-Chairman, Mrs. I. Graves, Scarborough Junction. Secretary, Mrs. L. M. Wedd, 364 Beresford Ave., Toronto. *Mrs. Robert Tier, Islington (Lynd. 2576). Mrs. A. E. Pugsley, Sutton West. Mrs. W. J. Fuller, Newmarket. Mr. G. I. Hambly, Unionville. *Mr. George V. Prior, 317 Harvie Ave., Toronto.

LOCAL BOARDS—*Continued*

(Those marked * are municipal nominees)

SEPARATED TOWNS

BROCKVILLE	*Chairman, Mrs. Alice J. Comstock, Brockville. Secretary, Mrs. J. S. Copland, Brockville. Mrs. Jos Fitzpatrick, Pearl St., Brockville. *Mr. George K. Dewey, (Town Clerk) Brockville. Mr. Henry Walter, 41 William St., Brockville. Mr. W. F. Chapman, Waterworks Department, Brockville.
GANANOQUE	Chairman, Mr. T. I. Ellis, Gananoque. Secretary, Mrs. J. A. Jackson, Gananoque. Mrs. W. Crowter, Gananoque. *Mr. Wm. Fairman, Gananoque. *Mr. T. D. O'Connor, Gananoque.
INGERSOLL	*Chairman, Mr. F. E. Waterhouse, Ingersoll. *Secretary, Mrs. Wm. Kirwin, Box 253, Ingersoll. Mr. John Lee, Ingersoll. Mr. Thos. Hamill, Ingersoll. Vice-Chairman, Mrs. Charles Scoffin, Ingersoll. Mrs. W. Lecky, Ingersoll.
PRESCOTT	Vice-Chairman Mr. W. P. McCarthy, Prescott. *Secretary, Mr. W. J. Ranson, Prescott. *Dr. W. J. Taugher (Mayor), Prescott. Mrs. Wm. Crannie, Prescott. Miss Louisa Jones, Prescott.
ST. MARY'S	Chairman, Mr. B. F. Lancaster, St. Mary's. Vice-Chairman, Mr. D. L. O'Brien, St. Mary's. Secretary, Mrs. S. J. Dunseith, St. Mary's. *Mrs. William Mills, St. Mary's. *Mr. J. K. Richardson, St. Mary's.
SMITH'S FALLS	*Chairman, Mr. Robert Hawkins, Smith's Falls. Vice-Chairman, Mr. Richard Craig, Smith's Falls. Secretary, Mrs. H. S. Coombs, Smith's Falls. Mrs. Arthur Jones, Smith's Falls. *Mr. Ed. J. Gilmour, Smith's Falls.
TRENTON	*Chairman, Mr. P. J. O'Rourke, Trenton. Secretary, Miss Helena Drescoll, Trenton. *Mr. W. J. Potts, Trenton. Mr. Thos. Jarrett, Trenton. Mr. C. W. Lott, Trenton.
WALKERVILLE	*Chairman, Dr. C. W. Hoare, Devonshire and Wyandotte Sts., Walkerville. Vice-Chairman, Mr. Wm. Grant, 125 Kildare Rd. Secretary, Mr. H. L. Berry, Box 53, Walkerville. *Mrs. J. H. Coburn, 134 Argyle Rd., Walkerville. Mrs. O. C. Tilman, 61 Victoria Rd., Walkerville. Mr. A. E. Cock, Walkerville.

DISTRICTS

ALGOMA	Chairman and Acting Secretary, Mr. J. H. Glanville, Thessalon Vice-Chairman, Mr. Henry Knight, Jr., R.R. No. 1, Sault St. Marie. Secretary, Mrs. S. M. McGuire, Thessalon. Mr. E. A. White, Bruce Mines. Mr. H. M. Gibbs, Richard's Landing, St. Joseph's Island. Rev. Richard Haines, Blind River.
DRYDEN	Chairman, Mr. Alfred Pitt, Dryden. Mrs. Dingwall, Dryden. Mrs. H. M. Davidson, Dryden. Rev. H. A. Rivers, Dryden. Rev. R. S. Smith, Dryden. Mr. M. S. Campbell, Dryden.
KENORA	Chairman, Mrs. J. P. Earngey, Kenora. Secretary, Mr. Percy E. Langford, Kenora. Mrs. Thos. Proudlock, Kenora. Mr. H. Cornish, Keewatin. Mr. Alex. B. Johnstone, Keewatin.

LOCAL BOARDS—*Continued*

(Those marked * are municipal nominees)

DISTRICTS—*Continued*

MANITOULIN	Chairman, Rev. W. T. Swainson, Gore Bay. Secretary, Mrs. W. W. Anglin, Mindemoya. Mr. Fred Smith, Gore Bay. Mr. T. J. Jackman, Killarney. Mrs. Howard Smith, Manitowaning. Mrs. P. L. McGilvery, Little Current. Mr. W. F. Edmunds, Silverwater.
MUSKOKA	Chairman, Mr. D. T. Hodgson, Bracebridge. Secretary, Mrs. W. Gebhardt, Bracebridge, Box, 251. Rev. Frederick Berner, MacTier. Rev. John B. Lindsell, Gravenhurst. Mrs. J. T. Andrews, Bracebridge. Rev. W. Cairns, Port Carling.
NORTH BAY AND NIPISSING	Secretary, Mrs. Wm. Anderson, North Bay. *Mr. A. Jackman, North Bay. Mr. C. A. Fink, Mattawa. Mrs. Wm. White, 205 McIntyre St. E., North Bay. Mr. Gordon R. Brady, 37 Main St. E., North Bay. Mrs. George Rutherford, 200 Worthington St. E. North Bay. *Mr. Ralph Sheppard, North Bay.
PARRY SOUND EAST	Chairman, Mr. Harry Hayward, Scotia Junction. Vice-Chairman, Mr. A. M. Church, J.P., Sundridge. Secretary, Rev. T. M. Murray, Powassan. Mrs. T. A. Mitchell, South River. Mrs. R. T. Armstrong, Burks Falls.
PARRY SOUND WEST	Chairman, Mr. Frederick Tasker, Parry Sound. Secretary, Mr. Francis A. White, Parry Sound. Mrs. F. L. Walton, Parry Sound. Rev. Father Collins, Parry Sound. Mrs. C. H. Knight, Parry Sound.
RAINY RIVER	Chairman, Mrs. J. W. Walker, Fort Frances. Secretary, Mr. C. Bruce Campbell, Fort Frances. Mr. H. C. Grimshaw, Rainy River. Mrs. W. F. Sullivan, Emo. Mr. Alexander F. Cameron, Stratton.
SIOUX LOOKOUT	Chairman, Dr. W. E. C. Day, Sioux Lookout. Secretary, Mrs. W. Green, Sioux Lookout. Mr. J. A. Hodder, Sioux Lookout. Mrs. Oscar Anderson, Sioux Lookout. Mrs. W. Plunkett, Sioux Lookout. Rev. F. C. Sevier, Sioux Lookout.
STURGEON FALLS	Secretary, Mr. A. A. Aubin, Sturgeon Falls. Mr. Philip Levesque, Sturgeon Falls. Mrs. George Cockburn, Sturgeon Falls. Mrs. Alphonse Legendre, J.P., Verner.
SUSBURY	Chairman, Mr. George S. Buchanan, Sudbury. Vice-Chairman, Mrs. J. J. Kehoe, Sudbury. Rev. J. T. Brennan, Espanola. Mrs. W. A. McDonnell, Coniston. Mr. W. J. Hambly, Coppercliff. Mr. A. Brundage, Capreol. Mr. Alexander Fournier, 11 Elm St. E., Sudbury.
TEMISKAMING	Chairman, Mr. John Clark, Englehart. Vice-Chairman, Dr. J. A. McInnis, Timmins. Secretary, Mr. Woods, New Liskeard. Mr. A. K. Roberts, Woolworth Block, Cobalt. Mr. Richard Carter, Kirkland Lake. Mrs. John Hough, Matheson. Mrs. A. J. Waters, Cochrane. Dr. E. F. Armstrong, Cobalt. Major J. E. MacQuaig, Haileybury.

LOCAL BOARDS—*Continued*

(Those marked * are municipal nominees)

INDIAN RESERVES

Batchewana	Indian Agent, Mrs. (Canon) Johnston, Garden River.
Garden River	Indian Agent, Mr. C. F. Rothera, Thessalon.
Thessalon, Mississquga	Mr. Oscar Cole, J.P., Massey.
Spanish River, Serpent River	Mr. G. E. Sims, 166 East St., Sault Ste. Marie.
Brantford	Superintendent, Lt.-Col. C. E. Morgan, Brantford. Rev. J. G. White, R.R. No. 6, Hagersville.
Six Nations	Mr. Elliott Moses, Ohsweken. Miss Cora Russell, Hagersville. Mr. H. M. Hill, c o Lt.-Col. Morgan, Brantford. Mr. P. J. Atkins, Six Nations. Secretary, Mrs. Wm. Smith, R.R. No. 6, Hagersville. Rev. Mr. Ruff, Ohsweken.
Cape Croker	Indian Agent, Mr. Arthur C. Porte, Cape Croker. Vice-Chairman, Mrs. Chas. Gilbert, Wiarton. Secretary, Mr. Oliver Johnston, Cape Croker. Rev. Father Cadot, Cape Croker. Mrs. Peter Waukey, Cape Croker. Chief Chas. K. Jones, Cape Croker. Mrs. Wm. Akiwenzie, Cape Croker. Rev. R. R. Elliott, Cape Croker.
Chippawa Hill (Chippawas of Saugeon)	Indian Agent, Mr. Donald Robertson, Chippawa Hill. Vice-Chairman, Mrs. A. Ritchie, Chippawa Hill. Secretary, Mr. Sidney S. Mandowob, Chippawa Hill. Mrs. E. Joshua, Chippawa Hill. Mr. Joseph Johnston, R.R. No. 2, Allenford. Rev. Mr. Weir, Chippawa Hill.
Gore Bay	Indian Agent, Mr. E. T. Priddle, Gore Bay. Rev. Eugene Papineau, Little Current. Mrs. John Hay, West Bay. Mrs. Paul Cada, Sheshagwaning. Rev. B. P. Fuller, Sheshagwaning.
Highgate	Indian Agent, Mr. Nelson Stone, Highgate. Vice-Chairman, Rev. J. C. Nethercott, Bothwell. Secretary, Mrs. Eunice Snake, Bothwell. Mrs. James Gardiner, Thamesville. Mr. Albert Tobias, Sr., Bothwell.
Manitowaning	Indian Agent, Mr. R. J. Lewis, Manitowaning. Mr. Wm. Kinoshameg, Wikwemikong. Mrs. Jos. Bwanishing, Wikemikong. Mrs. Chas. S. King, Wikwemikong. Rev. Edwin Weeks, Little Current. Rev. G. A. Artus, Wikwemikong.
Muncey (Chippawas, Munceys, Onedias of Thames)	Indian Agent, Mr. A. D. Moore, Muncey. Chairman, Rev. Oliver Strapp, Muncey. Secretary, Mrs. Fred Dodson, Muncey. Rev. Mr. Cottam, Muncey. Mrs. Lillie Powless, Muncey. Rev. Wm. Patterson, Muncey. Mrs. Sophia Fox, Muncey.
Sturgeon Falls (Dolis, French River, Nipissing and Timagami)	Indian Agent, Mr. George P. Cockburn, Sturgeon Falls. Chief Peter Beaucage, Sturgeon Falls. Mrs. Benjamin Goulais, Sturgeon Falls. Mrs. Peter McLeod, Sturgeon Falls.
Walpole Island (Chippawas of Sarnia and Pottawattomies)	Indian Agent, Mr. Thomas Paul, Sarnia. Rev. Wm. Harding, Sarnia. Rev. S. A. Brigham, Walpole Island. Mr. Nicholas Plain, Sarnia. Mrs. John Solomon, Walpole Island. Mrs. Dan Bressette, Ravenwood.
Christian Islands	Chairman, Harold J. Eade, Indian Agent, Christian Island. Secretary, Rev. R. Cowling, Christian Island. Rev. Father Kadoo, Christian Island. Robert Marsden, Postmaster, Christian Island. Mrs. Wm. Assance, Christian Island.

LOCAL BOARDS—*Continued*

(Those marked * are municipal nominees)

CITIES

BELLEVILLE	Chairman, Mr. Robert Tannahil, 147 George St., Belleville. Secretary, Miss Anna M. Hurley, 46 Queen St., Belleville. Manager, Bank of Montreal, Belleville. *Mr. W. A. Woodley, 56 Catherine St., Belleville. *Mrs. Lillian Mikel, 285 Charles St., Belleville. Mr. Charles Hanna, Belleville.
BRANTFORD	*Chairman, Judge A. D. Hardy, Brantford. Secretary, Mr. F. W. Thompson, Willard Hall, Brantford. Dr. C. C. Fissette, Brantford. Mrs. Mark Hunks, 289 Nelson St., Brantford. *Mrs. S. H. J. Reid, 126 Albion St., Brantford.
CHATHAM	*Chairman, Rev. R. J. M. Perkins, Chatham. Vice-Chairman, Mr. Albert Groombridge, Chatham. Secretary, Mrs. Jas. P. Dunn, 49 Stanley Ave., Chatham. *Mrs. R. V. Bray, Chatham. Mr. Chas. Austin, Chatham.
FORT WILLIAM	*Chairman, Mr. J. R. Crawford, 109 Cuthbertson Block. *Vice-Chairman, Mr. E. C. Smith, 216 Finlayson St. Secretary, Mrs. Garnet Cronk, Fort William. Mrs. George A. Graham, 400 S. Vickers St., Fort William. Mr. W. P. Bailley, 160 E. Amelia St., Fort William. Mr. J. R. Pattison, 508 N. John St., Fort William. Mrs. John McDonald, 343 N. Norah St., Fort William.
GALT	Chairman, Mr. Mark Mundy, Galt. Vice-Chairman, Mrs. Thos. Barrett, Galt. Secretary, Mrs. Jean A. Lash, Galt. *Mr. Alexander H. White, 43 Spruce St., Galt. Mrs. Hugh Wiffler, 47 Lansdowne Rd. N., Galt. *Mr. Aaron W. Hilborn, 60 Wentworth Ave., Galt.
GUELPH	Vice-Chairman, Mrs. T. Goldie, 250 Queen St., Guelph. Secretary, Mr. C. W. Dawson, 9 Clinton St , Guelph. *Mrs. A. Anderson, 123 Cork St., Guelph. *Ald. H. Quarmsby, 21 Paisley St., Guelph. Mr. John Armstrong, 95 Wyndham St., Guelph.
HAMILTON	*Chairman, Mr. R. T. Kelley, Hamilton Advertising Agency. Vice-Chairman, Mrs. J. Inman, 16 Gibson Ave., Hamilton. Secretary, Mr. W. V. Patterson, City Hall, Hamilton. *Mr. Wm. Smith, 24 King St. W., Hamilton. Mrs. Wm. Earl, 92 Barnesdale Ave. N., Hamilton. Rev. Jos. W. Englert, 120 Sherman Ave., Hamilton.
KINGSTON	*Chairman, Mr. Sam S. Corbett, 216 Princess St., Kingston. Secretary, Prof. W. A. MacKintosh, Queens University. Mrs. M. Easson, 52 Colborne St., Kingston. Mrs. Keenan, 265 Barrie St., Kingston. Miss Frances Sullivan, St. Clare Apts., Kingston.
KITCHENER	Chairman, Mr. Robert Smyth, 103 Queen St. S., Kitchener. Secretary, Mr. A. R. Goudie, 42 King St. S., Kitchener. *Mrs. Chas. K. Massell, 91 Scott St., Kitchener. *Mr. W. J. Motz, Kitchener. Mrs. Mary Kaufman, 35 Roy St., Kitchener.
LONDON	*Chairman, Mr. W. J. Kilpatrick, London. Vice-Chairman, Mrs. J. J. Roach, 644 King St., London. *Secretary, Mr. S. Baker, City Clerk, London. Mr. E. R. Dennia, Dundas St., London. Mrs. John Gemmell, 16 Evergreen Ave., London. Mrs. J. W. Cunliffe, London.
NIAGARA FALLS	Chairman, Mrs. T. E. Ferris, 941 Roberts St., Niagara Falls. Secretary, Rev. Guy B. Gordon, 767 River Rd., Niagara Falls. *Vice-Chairman, Mr. M. C. Goodsir, 509 Victoria Ave. Mrs. A. E. Hallam, 126 Bridge St., Niagara Falls. *Mrs. W. J. McMurray, Niagara Falls.

LOCAL BOARDS—*Continued*

(Those marked * are municipal nominees)

CITIES—*Continued*

OSHAWA	Chairman, Mrs. Edith C. Myers, 97 King St. E., Oshawa. Secretary, Miss Dorothy Farncomb, Municipal Offices. Rev. Father Dench, Oshawa. *Mrs. Frank Robson, R.M.D., Oshawa. Mr. Gilchrist, c o General Motors, Oshawa.
OTTAWA	*Chairman, Mr. Herbert McElroy, 36 Thornton St., Ottawa. Vice-Chairman, Mrs. Flora McTavish, 314 Frank St. Secretary, Mrs. Annie M. Hasley, 2 Queen St., Ottawa. Mme. S. Lelievre, 211 Stewart St., Ottawa. Mr. F. W. McCrae, 425 Bronson Ave., Ottawa Mr. Thos. Burns, 2 Queen St., Ottawa. *Mr. Frank La Fortune, 3 Cobourg St., Ottawa.
OWEN SOUND	Chairman, Mrs. George E. Dunoon, 9th Street E. Vice-Chairman, Mrs. W. E. Dunn, 850 3rd Avenue W. Secretary, Dr. A. E. Little, Owen Sound. Mr. A. F. Armstrong, City Treasurer, Owen Sound. *Miss Grace M. Lediard (Sec. to Mayor and Council). *Mr. R. D. Little, Owen Sound. Mrs. Alfred Holstock, Owen Sound.
PETERBOROUGH	Chairman, Mr. James Abraham, 189 Rubidge St. *Secretary, Mr. F. H. Dobbin, 295 Reid St., Peterborough. Mr. T. J. McMurray, 438 Mark St., Peterborough. Vice-Chairman, Mrs. Jos. Mills, 451 Hunger St. W. *Mrs. George Benton, 728 Water St., Peterborough. Mr. M. J. Maher, 372 Rubidge St., Peterborough.
PORT ARTHUR AND THUNDER BAY	Chairman, Mr. A. C. Wood, Port Arthur. Secretary, Mr. I. L. Matthews, Port Arthur. Mrs. W. A. Milne, Port Arthur. Rev. Wm. Reid (Corresponding Member), Schreiber. *Ald. H. Hogarth, Port Arthur. *Ald. R. G. Walsh, Port Arthur. Mrs. T. S. T. Smellie, 216 Court St. N., Port Arthur.
ST. CATHARINES	*Chairman, Mr. A. M. Watts, Queen St., St. Catharines. Vice-Chairman, Mrs. Mayr Malcolmson, Bellevue Terrace. Secretary, Mr. L. P. Cunningham, 146 King St. *Mr. D. C. Hetherington, 36 Catherine St., St. Catharines. Mrs. R. English, 35 Louisa St., St. Catharines. Mrs. L. M. Schenck, York St., St. Catharines.
ST. THOMAS	*Chairman, Mr. Frank Harding, 58 East St., St. Thomas. *Vice-Chairman, Mr. George H. Sloggett, 37 Forest Ave. Secretary, Miss Tessie Ingram, 134 Wellington St. Mrs. Rhea Butler, St. Thomas. Mrs. John Lane, 10 Erie St., St. Thomas.
SARNIA	*Chairman, Mr. John Wilkinson, 506 Christina St. N. Sarnia. Vice-Chairman, Mrs. F. W. Kittermaster, 184 London Rd. Secretary, Mr. H. Steele, 327 Stuart St., Sarnia. Dr. R. G. H. McDonald, 300 Christina St. N., Sarnia. Mrs. George Taylor, Sarnia. *Miss Grace Tuck, 153 Cameron St., Sarnia.
SAULT STE. MARIE	Chairman, Mr. A. E. Whytall, 155 Tancred St. Vice-Chairman, Mrs. A. Smith, John St., Sault Ste. Marie. Secretary, Mr. George W. Martin, 430 John St. Mr. Charles Rose, 292 Albert St., Sault Ste. Marie. *Mr. Wm. O'Brien, Sault Ste. Marie. *Miss Anna Coulter, Sault Ste. Marie.
STRATFORD	*Chairman, Mrs. Harry Davis, 57 St. David St., Stratford. *Secretary, Mr. J. J. Dalrymple, 99 Perth St., Stratford. Mrs. Thos. Ballantyne, 175 Cambria St., Stratford. Mrs. George McLagan, 210 Water St., Stratford. Mr. W. J. Blakeston, 79 Mowat St., Stratford.

LOCAL BOARDS—*Continued*

(Those marked * are municipal nominees)

CITIES—*Continued*

TORONTO........................Chairman, Mrs. A. D. Fisher, 4 Roxborough St. E., Toronto.
*Secretary, Miss Jane Barclay, 157½ King St. E., Toronto.
Rev. F. E. Powell, 752 Logan Ave., Toronto.
Mrs. J. Litster, 10 Selby St., Toronto.
*Mr. Wm. Byers, Brigadier, S.A., Albert St., Toronto.
Miss Mary J. Foy (Catholic Welfare Bureau, 67 Bond St).

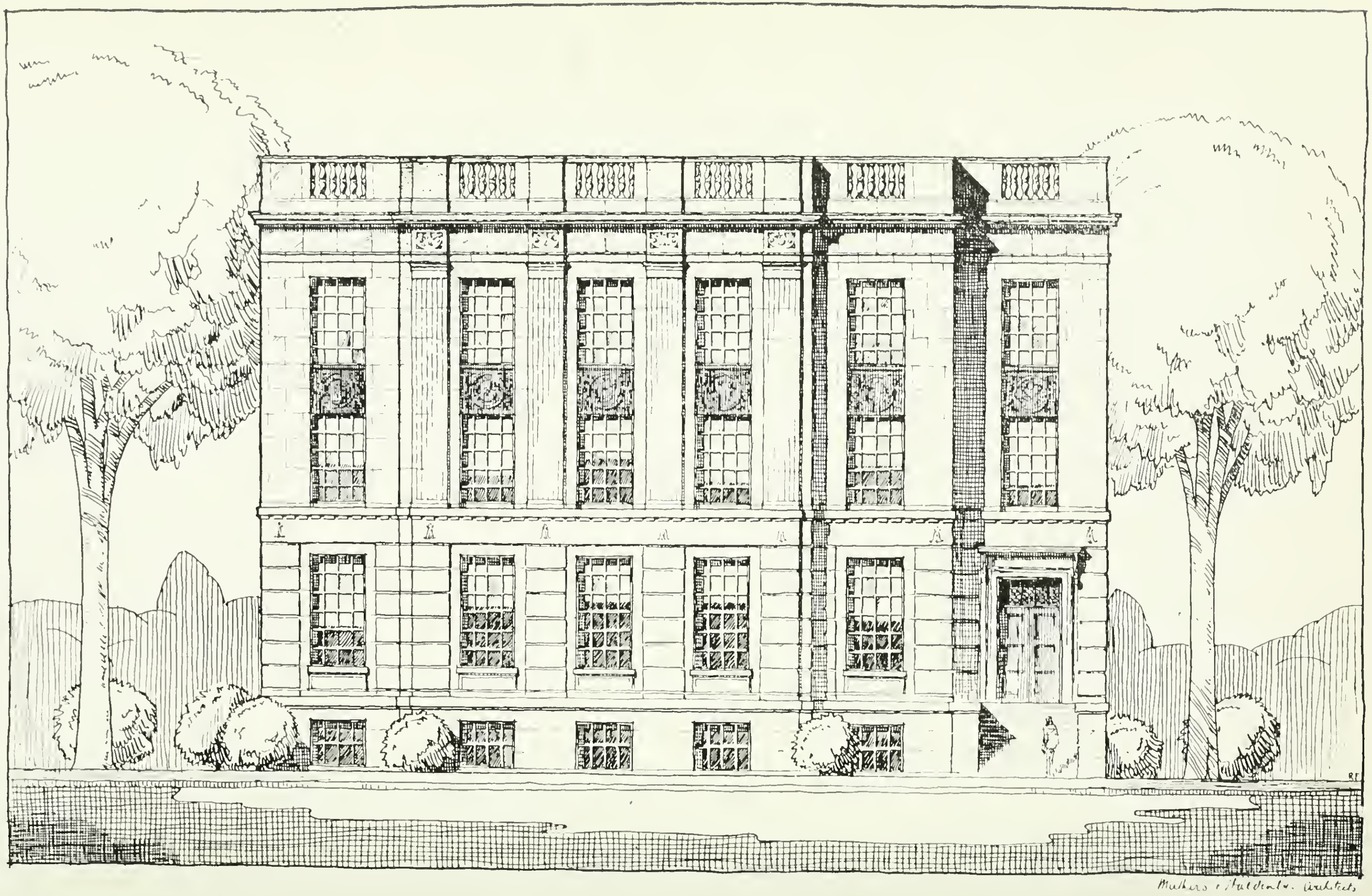
WELLAND........................Vice-Chairman, Mrs. L. B. Duff, Welland.
Secretary, Mrs. W. J. Jacobs, 17 Elizabeth St., Welland.
Mrs. (Dr.) Howell, Welland.
*Mr. Edward Anderson, Welland.
*Mr. John Voltz (Alderman), Welland.
Mr. Harry Jones, Welland.

WINDSOR........................Chairman, Dr. Remi Casgrain, 141 Pitt St. W., Windsor.
*Secretary, Mrs. M. E. Fotheringham, Office of City Clerk.
Miss Helen Bartlett, Victoria Ave., Windsor.
*Ald. Chas. D. Fraser, 550 Bruce Ave., Windsor.
Mr. John A. McKeon, 465 Goyeau St., Windsor.

EAST WINDSOR.................Chairman, Mr. E. C. Poisson, 315 Sandwich St.
*Vice-Chairman, Mrs. M. G. McWilliams, 1081 Arthur Rd.
Secretary, Mr. C. K. Walton, Pillette Rd., East Windsor.
*Mrs. Stella Celina, Social Worker, East Windsor.
Mrs. Harry Baby, Drouillard Rd., East Windsor.

WOODSTOCK....................Chairman, Mr. M. J. Brophy, Woodstock Business College.
*Vice-Chairman, Mrs. E. W. Nesbitt, Woodstock.
Secretary, Mr. R. W. Ferguson, 20 Wellington St. N.
*Mr. George A. Davidson, 577 Dundas St., Woodstock.
Mrs. D. J. McGregor, 408 Admiral St., Woodstock.

JOHN M. MCCULLOUGH,
Secretary-Accountant,
Mothers' Allowances Commission.


RF
Mathers & Haldenby, Architects

St. Joseph Street Elevation of the New Chemical and Metallurgical Building of the Ontario Research Foundation

Ontario Research Foundation

REPORT

For the Year 1928-29.

Presented by the Chairman to the Lieutenant-Governor in Council
December, 1929.

SESSIONAL PAPER No. 39
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Toronto, April 3rd, 1930.

MAY IT PLEASE YOUR HONOUR:

The undersigned has the honour to present the report of The Ontario Research Foundation for the year 1928-29.

Respectfully submitted,

G. H. FERGUSON.

HONOURABLE W. D. ROSS,
Lieutenant-Governor,
Government House,
Toronto, Ontario.

THE HONOURABLE G. HOWARD FERGUSON, K.C., B.A., LL.B.,
Prime Minister and President of the Council.

MY DEAR SIR:—

I have the honour to report upon the work of The Ontario Research Foundation for the year ending December 31st, 1929.

It has been a further year of preparation in buildings and equipment, in staff organization, and in establishing contacts with the various work with which the Legislature has charged the Foundation. It was found necessary to add to the laboratory facilities and equipment provided toward the close of 1928. The new buildings, now approaching completion, will serve for some years. Additional stories to this new building, and extensions, will be constructed when increased accommodation is required.

The Report of the Director of Research, Dr. Speakman, tells of connections being established with, and services undertaken for Industry, Animal Husbandry, and Departments of Government concerned in the development of the Natural Resources of the Province. A copy is herewith attached, and constitutes an integral part of this report.

It will be observed that the experiences of the year give promise of intimate co-operative relationship between the Foundation and the practical operators in Industry, Agriculture, and Animal Husbandry, in the Province. They indicate that, through the courtesy of Ministers and their Deputies, a working partnership has been developed with the several Departments of Government desirous of making scientific enquiries. We have deep satisfaction in the generous support and invaluable assistance of scientific men within the Universities of the Province, and the offer of assistance from scientific circles in all countries where researches are being carried through. I believe I am warranted in saying a good start has been made, and that in the brief period of less than two years since the Foundation was authorized by the Legislature and charged with high responsibilities, useful progress has been made. Already within the circle of scientific men who staff the Foundation there is a fine spirit of co-operation in service, constituting an asset which will come to be of great practical value.

The wisdom of the Legislature in claiming co-operation with it by private citizens and private corporations in laying the foundation of a permanent endowment by joint action, may have far-reaching effects. We respectfully suggest that the capital sum already established shall not be impaired by expenditures upon buildings and equipment, nor for annual expenditures in the maintenance of the laboratory and other services; rather that sustained effort shall be made to increase the capital of this endowment by joint subscriptions from further private persons and corporations, and the Legislature, the interest upon which will be used to assist in meeting annual charges.

To provide the needed monies required for gradually expanding work, we respectfully suggest that the Legislature will assume the cost for needed laboratories and equipment (the land and buildings will be the property of the Provinces); that Industry, organized into groups, will undertake payment for researches undertaken for such groups, and that Departments of Government will similarly undertake the charges incident to enquiries and researches carried through upon their request.

It will be recognized that in addition to these sources of income from groups in Industry and Government Departments, monies will be required for investigations and researches and for overhead charges which to some extent cannot be met other than from the endowment, and that these will reach proportions which will exceed the income from the invested endowment capital. We therefore respectfully suggest that any uncovered balance of expenditures exceeding income from all sources shall be met by the Treasurer of the Province.

We are now establishing procedure which will be supremely influential in the scope of an adventure of momentous importance to the Province. As intimated, good sense and good judgment were shown in the plan of joint effort established by the Legislature in the Bill which authorized the Foundation. We respectfully urge its development as we proceed. We should retain what we now have, and should yearly increase the capital of the endowment fund; yearly add to the effectiveness of equipment, physical and human; yearly become increasingly a factor in better performed work in factory, on farm, and in developed resources of the Province; with the cost, to an important degree, met by those who benefit, and at a relatively small charge to any of the participants.

I submit herewith the Balance Sheet as of 31st December last, and with it the Income and Expenditure for the year 1929. It will be observed that the disbursement from the inception of the Foundation to date for buildings and equipment has amounted to $181,768.31. Following the proposal as above, we have ventured to show this sum as a Bill Receivable due by the Government of the Province. For the next year, the completed work in these buildings and in the equipment will call for a further $75,000.00 (approximately), and thereafter a modest sum annually until the need of the work requires further building operations.

It will be remembered that the subscriptions of private persons and corporations to the Foundation were payable in equal annual amounts over a period of five years; similarly, the subscriptions by the Government for a like amount.

It will be observed that the aggregate private and Government subscriptions for the five-year period are $3,742,920.00, upon which $1,445,860.00 have been paid. The unpaid balances are due and payable in 1930, 1931, and 1932.

It will be observed that the expenditures for the year, $63,362.84, exceeded the income of the year, $58,999.97, by $4,362.87. In the plan for further co-operation in this enterprise by the Legislature, this shortage, we hope, will be met by the Provincial Treasurer, and the endowment resources of the Foundation will enter 1930 unimpaired.

I have the honour to be,

Yours faithfully,

J. W. Flavelle,
Chairman.

The Ontario Research Foundation, 47 Queen's Park, Toronto

REPORT OF THE DIRECTOR OF RESEARCH, 1928-29

To Sir Joseph Flavelle, Bart., LL.D.,
Chairman.

Dear Sir:—

During the month of September, 1928, a sufficient amount of money had been promised by private corporations and individuals to comply with the provisions of the Act Establishing a Research Foundation, and therefore the Foundation may be said to have come into being at this time.

Buildings.—One of the earliest duties which engaged the time and attention of the Director was to secure and equip suitable premises with office space and a limited amount of laboratory accommodation. The Government of the Province placed at our disposal the house and premises at 47 Queen's Park, and subsequently made it possible for us to include in any general scheme of building the house and premises at 43 Queen's Park. As a result of this action on the part of the Government we have now available a piece of land very suitably located and sufficiently large to allow the erection of adequate laboratory buildings for some time to come. At the present time we are occupying and using one of the two houses and in addition a new fireproof building is approaching completion on the rear portion of the plot.

An important event in our history occurred, on September 28th last, when the Corner Stone of the new building was laid by the Prime Minister of the Province, the Hon. Mr. Ferguson. A large gathering of interested onlookers was present, including members of the Legislature, members of the Foundation, representatives from the Universities and other public bodies. The address of the Chairman was followed by the laying of the Corner Stone by the Hon. Mr. Ferguson and the prayer of dedication by the Rev. Canon Cody, after which the Prime Minister of the Province addressed the gathering. Following the ceremonies those present were invited to inspect the laboratories of the Foundation.

The architects of the Foundation have prepared a general plan to cover the whole of our property and as occasion demands additions will be made to our existing facilities. Provision has been made in the laboratories for carrying out scientific research on biological subjects, chemistry, textiles, metallurgy, chemical engineering and in addition the work which is performed in these laboratories can, whenever necessary, be repeated on a semi-commercial scale in order to obtain more accurate and suitable data for the use of those interested in the research. On account of these changes and additions to the physical equipment of the Foundation construction and alterations have been in progress during the entire period of our existence, giving the staff a large amount of work to do and, in addition, interfering to some extent with the actual carrying on of scientific research. During the coming year this period of our history will close and for the first time the staff will be able to give their undivided attention to the problems which we are investigating and the general work of the Foundation. In providing us with such admirable facilities for scientific work we are grateful for the co-operation of the contractors who have been responsible for the additions and the new building, and also the staff of the Superintendent of the University of Toronto. Col. LePan and his staff placed at our disposal, freely, their experience and knowledge with regard to the design and equipment of laboratories and in addition carried out the work in a most satisfactory manner.

ADVISORY COUNCIL.—A group comprising twenty-five gentlemen, representing the scientific, agricultural and industrial interests of the Province, were appointed to act as an Advisory Council (see Appendix A). The first meeting was held on May 27th, 1929, to explain to the members the aims and objects of the Foundation. A second meeting was held on October 31st to report on the progress made and to enlist the sympathetic co-operation of the Council in making the work of the Foundation more widely known throughout the Province.

STAFF.—The success or failure of this Foundation must depend to a very large extent on the character and training of those responsible for carrying on the research work and other duties which we perform. The Ontario Research Foundation is not merely an organization created to carry on scientific research, but the spirit of the Bill creating the Foundation is that such work shall be undertaken and whatever result obtained brought to bear in a most intimate manner on the conduct of Industry and Agriculture within the Province and the development of its natural resources. This dual purpose underlying our efforts of necessity demands that members of the staff shall possess in the first place, an interest in and capacity for scientific research, but in addition they shall have a sympathetic understanding of the difficulties and the problems of agriculture and industry. In order that this relationship may be established and developed, members of the staff must have a capacity to meet and understand the leaders in that branch of industry, agriculture or technical departments of Government, to which their scientific work is related. During the past year, additions have been made to the staff as two types of occasion demanded. In certain cases the interest aroused over a particular piece of work has created a demand for a suitable man and an attempt made to secure him. On the other hand, there have been occasions when the possibility arose of being able to secure for the Foundation men of the right type and additions have been made to the staff, knowing that their work will create opportunities for service and thus establish a working relationship between the Foundation and industry. In selecting a scientific staff an attempt has been made to avoid as far as possible interfering with the work of existing bodies in Canada, particularly those engaged in scientific work, and whenever possible Canadian graduates who for various reasons had left this country have been brought back to make their contribution to our work. These men returned to Canada in many cases richer in knowledge and experience as a result of the time spent in a different environment. In this connection a serious shortage of first-class scientific research workers, not only in Canada, but in other parts of the world, must be mentioned. With the increased attention that is being devoted in all countries to scientific research by private corporations and by government departments, it is becoming increasingly difficult to secure the right type of men. They represent a very important national asset and wherever possible their capacity should be utilized at home. As the Foundation develops closer contacts with industry, one of the most important contributions it can make to industrial progress will be to act as a training school for young men who will pass through these laboratories from our Universities and ultimately find a place in the industrial organizations of this country.

Attached to this report is a list of the present staff of the Foundation, showing the duties which they have undertaken and also giving their previous academic and other experience (see Appendix B).

GROUPS.—It is clearly intended by the nature of the organization created by the Act passed by the Legislature that, in the main, work undertaken by the Foundation shall be on behalf of the great body of industry and agriculture, rather than for the benefit of a single individual or firm desiring the benefits of scientific research. On this account an attempt has been made during the past fourteen months to establish a connection between the Foundation and various groups of manufacturers. The first duty falling upon the staff has been that of placing before such groups the general principles underlying scientific control and scientific research in industry, and also presenting the possibility, newly created, of working as partners with the Foundation in the investigation of their particular problems. At different times during the period covered by this report you, yourself, with members of the staff have discussed this question with the following groups: Metal Industries, Tanners, Woollen Goods Manufacturers, Packers, Confectioners, Honey Producers, Furniture Manufacturers, Fox Breeders, Printers, Ventilating Engineers, Roofing Manufacturers. We are only at the commencement of the educational work which is required to bring about the formation of associations or groups corresponding to the twenty or more industrial research associations which are now functioning in Great Britain. Such a conception of co-operation between manufacturers in the support of scientific research is relatively new within this Province and constitutes the most difficult problem facing the staff at the present time. In addition to the conception of co-operation in the field of scientific research, it has been obviously necessary to associate with this the duty and privilege of carrying whatever financial charges are associated with the work done on behalf of the group. Even though it were not necessary for financial reasons to make this request, it appears advisable that it should be so in order to secure what is indispensable, namely, the active interest and co-operation of those engaged in the particular field of industry. The staff, in addition, will gain greatly from this intimate association not only in the form of suggestion and guidance in the conduct of their work, but by a sympathetic criticism which is based on co-partnership and equality in the enterprise. Insofar as our work during the past year is concerned, we have little of a concrete nature to show for what has been done in the formation of groups. Similarly, we feel that manufacturers and others will benefit greatly by developing a closer relationship with scientific men and with each other, if only by stimulating or fostering that spirit of enquiry which should characterize their efforts. At the present time work is being performed in the laboratories on behalf of three groups, Woollen Manufacturers, Packers and Metal Industries, and within the near future I hope that a similar relationship will be established between the Foundation and other groups in the above list.

VISITS.—One of the most important sources of technical information and scientific knowledge is that which is based on a series of personal contacts between the staff of the Foundation and scientific men working in different parts of the world. When the Foundation commenced its task no contacts of this kind existed other than those which were entirely personal in character.

During the past year and a half every member of the staff has on one or more occasions visited different centres of agricultural and industrial research in either Canada, Great Britain or the United States. We are receiving, as a result of these visits, generous help from a large number of persons who have at different times placed at our disposal their long experience in this field, and at the present time we are in a position to obtain very readily the best available knowledge on particular subjects in different parts of the world. This spirit of co-operation frequently prevents the repetition of previous work and is a most important contribution to the efficiency of the Foundation. The Foundation has been accepted as a subscribing member to three of the Research Associations in Great Britain. As a result of this generous co-opertaion with us we are receiving the confidential reports and publications based on an amount of scientific research work which could not possibly have been done at the price which we are paying for the privilege of membership. So far, we have not asked for assistance or advice from any of these older scientific research bodies without receiving it most generously.

The laboratories of the Foundation are within a short distance of the University of Toronto and this close physical contact and the relationship between the staff and members of the various departments of the University, have already proved themselves to be invaluable assets. On numerous occasions different members of our staff have called upon professors in the University for help and suggestions in connection with research problems engaging our attention. We have received nothing but a courteous reception and most generous assistance. Many of these distinguished scientists have given freely of their time to act on advisory committees, and altogether we are extremely fortunate in being able to call upon them. In a similar way a co-operative relationship has been established between the Foundation and different departments of Government, which enables the Foundation to make use of their long experience and accumulated knowledge with regard to various provincial problems. At different times during the period under review, visits have been paid by members of our staff to the other Universities in the Province and to the two Colleges at Guelph in order to place before the members of the staff their work at the Foundation and to enlist their sympathy and co-operation. The importance of these connections is not merely with regard to the day-to-day difficulties and problems which we encounter, and their real significance is only appreciated when one realizes the fact that progress in industry and in agriculture is ultimately dependent upon the new principles and accumulated knowledge which are the work of men actively engaged in pure scientific research. The efforts of the Foundation in the long run will become unfruitful if our progress is secured at the expense of those institutions whose function it is to train young scientific workers of the best type, and to pursue scientific research without any regard as to its possible utilitarian value. Although it is a commonplace amongst scientific men, one cannot repeat too often the statement that the work that the pure scientist is doing to-day may produce revolutionary changes in industry and agriculture to-morrow.

LIBRARY.—A library of current scientific periodicals with a foundation of files of the important ones is an essential instrument of any scientific research organization. Accordingly during the last twelve months keeping pace with the growth of the staff, we have greatly increased our subscriptions to journals both scientific and technical, and during the current year we shall receive regularly 160 journals. An attempt is being made also to purchase back numbers of a few of the most important ones. In all parts of the world there is a steady output of scientific and technical knowledge contained in the reports of Government departments and of research institutes. We are steadily establishing more and more contacts with such institutions and receiving their reports. Apart from the assistance that the library gives to the staff in the active work of the laboratories, it frequently enables them to secure information based on work already carried out in other places, and thus produces an economy in time and expense. It is to be hoped that as the Foundation becomes more widely known and appreciated by the manufacturers of the Province they will make better use of the facilities which we are providing. With the growth of the research groups it is our intention to summarize the most important contributions made in the various fields and make this information available to the members of these groups in the form of Bulletins.

Textile Research Laboratory.—Shortly after the Foundation was established the Director was asked to meet a representative deputation from the Executive of the Canadian Woollen Manufacturers' Association to discuss a possible working relationship. Previous to this meeting the Association had for several years been conducting a laboratory in Toronto for the purpose of giving scientific service to their members. It was their view that, provided suitable arrangements could be made, the work would be carried out with greater efficiency and to some extent a change in character if it could form a part of a more general body of industrial scientific research. As a result of these conversations the laboratory was transferred to the Foundation. During the period covered by this report we have received a regular contribution from the Association in support of the work. Mr. Ewing who had been previously in charge of the laboratory joined the staff of the Foundation and has continued to be responsible for the general conduct of the laboratory. Considerable additions have been made to the apparatus and other facilities for carrying out chemical and physical analytical work in connection with all types of textiles. It was understood from the commencement that in the main the work undertaken by the laboratory would be along routine lines rather than work of a research character. In practise the dividing line between routine service of this kind and investigational work is somewhat arbitrary, and in addition we are faced with the fact that a large section of the industry as at present organized not only requires the services of a routine laboratory, but in many cases the officers of companies require to be convinced of the value of even this simple type of scientific control. Experience in Great Britain and in other countries has shown conclusively that one of the easiest ways to create a lack of confidence in the work of research laboratories is to allow the work carried out to get too far in advance of the general technical and scientific outlook of those engaged in the industry. To avoid this difficulty it is customary to find in the older established Association Laboratories advanced scientific research accompanied by simpler work relating to raw materials and the small day-to-day difficulties associated with various plants. The Foundation will proceed gradually to erect on this basis a confidence, created by simple service, in the more fundamental and important investigations.

The increasing interest of the members of the Association in the laboratory has been shown in a variety of ways. The amount of work performed each month has more than doubled during this period. In addition to the analytical service rendered a steadily increasing number of enquiries of a more serious character are being received, often accompanied by personal visits to the laboratory of representatives of the companies. At different times during the summer months the Secretary of the Foundation and Mr. Ewing visited a large number of the plants within the Province where they have been welcomed. During these visits various problems of a plant character have been submitted to them for their consideration and in this way many useful suggestions have been made. It is regrettable, however, that the companies making the greatest use of the laboratories are those in which scientific work is already firmly established and not those which require most the service which we can provide. The experience of the last twelve months enables us to state with confidence that if the smaller companies would only grasp the opportunity they could secure assistance which would result in considerable savings and thereby lessen the anxiety and necessity for economy which have for so long been characteristic of this particular industry in Canada. It is with great pleasure that we record the active interest and support which we have received from the members of the Association's Advisory Committee in connection with this laboratory. There is every reason to believe that as a result of the interest of these gentlemen our present facilities will steadily expand, supplying still greater opportunities to the members of this Association.

A typical example of the sort of problems submitted to us during the year is one relating to the use of silk ribbons on blankets. Various sections of the industry manufacturing the blankets and the ribbons were all aware of the trouble, but it was impossible to get any unanimity of opinion with regard to the causes of fading and splitting. Before starting any laboratory work we called together the group, and obtained from them all the information we could, much of which was of a conflicting character, and then proceeded to outline and carry out a programme of simple experiments. The findings resulting from this research were communicated at a second meeting to the interested companies, and were accepted and put into practice without question by both the silk ribbon manufacturers and the users. Confidence in the laboratory is not entirely based on the scientific skill displayed by the staff, but also on a knowledge of the fact that those conducting and reporting on the experiments are in a real sense disinterested. On two occasions during the year we have called together the technical men engaged in the industry to attend a meeting held at the Foundation laboratories. Papers of a scientific and technical nature have been presented at the meetings by members of the staffs of the University of Toronto and the Foundation. The importance of such meetings in this country is accentuated by the fact that at the present time there are no facilities for education in textile technology, and in addition there is no professional society to act as a clearing house for information. It is felt that the Foundation has a duty to perform in such matters in addition to whatever actual research work is undertaken in our own laboratories.

Canada Packers, Limited, Fellowship.—In September, 1928, we received official notification from the senior officer of this group of meat packing companies of their desire to support a Research Fellowship. At that time the Director was fortunate in being able to secure for the laboratory Dr. A. D. Barbour, who was peculiarly fitted by previous training in chemistry and physiology to undertake research work in this field. The work done during the past twelve months in this laboratory is clear-cut and most convincing evidence of the great and varied benefits which accrue to an organization making use of a research laboratory. Each of the plants in the group is staffed with well-trained scientific men to direct and control routine operations so that from the commencement the laboratory has been concerned with fundamental problems. Experience has shown also that where a research laboratory is working in close harmony with scientific men in the industry the results obtained by the research are quickly appreciated and understood, resulting in rapid changes in the day-to-day operations in the plant. As the industrial plants of the Province become more and more organized along scientific lines I feel confident that the demand for and appreciation of research work will not diminish but steadily increase. Faced with these conditions it was possible to isolate a particular problem of real significance to the Company and to devote energy and thought to it without the constant interruptions which arise in the consideration of day-to-day problems. The confidence shown in this method has been amply justified by the results obtained. During the past twelve months Dr. Barbour has investigated in the laboratory the principles underlying the manufacture of a very complex biological product. The results obtained not merely in the laboratory but on a plant scale may be summarized as follows: The time required to produce a standard batch of this product has been cut in half, the factors controlling the composition are understood, and as a result the composition of the product is not subject to variation from day to day but is under the control of the operating staff. In addition a better product is being made and is now being sold to great advantage through the usual channels. We have derived the greatest benefit from our association with an advisory committee composed of scientific men engaged in the industry, and at the same time they have from time to time expressed their own appreciation of the benefits received from close contact with the staff of the Foundation as a whole.

METALLURGICAL RESEARCH.—Towards the end of 1928 a letter was received from the Toronto Chapter of the American Society for Steel Treating, containing various recommendations with regard to metallurgical research. A few weeks later the Society sent a deputation of members to discuss with the Chairman and the Director these and other matters, and arising out of this discussion the Foundation was fortunate in bringing back to Canada Mr. O. W. Ellis, who is now directing the work in this department. This early exchange of views also has developed into an earnest effort to build up a new and wider association to be known as the Ontario Metal Industries Research Association. At the present time the Council, under the leadership of Mr. Gifford of the Massey-Harris Company, are bringing the Division to the attention of a large number of metal using companies inthe Province and asking their co-operation in the work of the laboratories and in their financial support. Up to the present we have received favourable response from about forty-five to whom this information has been supplied. We hope that during the coming year this Association will become fairly established and be the means of transmitting to the industries of the Province not merely the findings from the investigations which we ourselves undertake but also full scientific and technical information which the Metallurgical Division is able to secure from current literature and from resecrach institutes in other countries.

Owing to the absence of facilities for scientific work in this field Mr. Ellis and his staff have not been able up to the present to undertake any fundamental research work. For the last four or five months a limited supply of apparatus has been available which has enabled the staff to undertake some work for several companies. The most important equipment is now being installed in the new building and we confidently expect that in a month's time the new laboratories will be equipped and ready for use. With these facilities at our disposal we shall be in a position to undertake a wide variety of work in chemical and physical metallurgy. In spite of the serious limitations in our equipment during the past twelve months, the staff has been able to undertake and report upon fifteen specific problems brought to our attention by different companies. Several of them have resulted in eliminating serious faults in operations or practice, leading to considerable savings in time and material.

This Division must take an interest not merely in industrial problems but also in the development and utilization of the mineral natural resources of the Province. The whole problem of the utilization of our iron ore reserves is receiving our serious consideration and one of the earliest duties of Mr. Ellis and Mr. Gordon was the securing of first-hand information with regard to present conditions in this industry. They have visited at different times Hamilton, Sault Ste. Marie and Port Arthur, where they have been recieved with the greatest kindness by those familiar with local conditions. Owing to the kindness of the Algoma Steel Company, Mr. Gordon was permitted to spend several weeks in their various plants and gained thereby a thoroughly up-to-date knowledge of modern practices relating to pig iron and steel production. In this connection we should like to express our sincere appreciation of the generous assistance we have received from the senior officers of the Department of Mines.

Animal Pathology.—This Division of the Foundation has been in existence for only a few months and even at the present time the facilities for work in this field are not yet complete. We are, however, already engaged in a most important piece of work undertaken at the request of the Minister of Agriculture, the Hon. J. S. Martin, namely, to investigate and report upon conditions in the Province with regard to Contagious Abortion in cattle. Before we received this official communication from the Minister the serious conditions existing had been brought to our attention by several individual breeders and veterinary surgeons and also by a deputation from the Ontario Veterinary Association. The Foundation, in response to the Minister's request, first appointed a committee composed of gentlemen engaged in agriculture with a distinguished group of scientific men. This Committee met on several occasions under the chairmanship of Mr. T. A. Russell, and finally recommended to the Foundation that we should place under observation for a period of at least one year about twenty herds of breeding cattle within the Province. The compilation of careful field records and laboratory testing of blood samples has already resulted in gathering together a good deal of valuable information. Dr. Hadwen and Dr. Gwatkin are also undertaking actual experimental research in connection with this important disease. We sincerely hope that during the coming year it will be possible to draw up some system of control which will be found suitable to conditions in Ontario and enable the farmers to face with greater confidence what at the present time can only be regarded as a menace. It is too early, and the problem is too difficult, to express any opinion as to what the outcome of the laboratory research will be. The problem is not a Canadian one but world-wide and by working in close co-operation with other research groups in different parts of the world who are giving their attention to the same problem, we hope to make available to the people of this Province the best advice and directions based on careful investigations.

I should like to call your attention to the serious losses which are at present falling upon those engaged in agriculture, owing to the prevalence of a large number of diseases in domestic animals which not only impair the health of the animal but also reduce, if not destroy, its food value. Realizing the monetary value of the livestock in this Province we strongly urge a more earnest and persistent effort to control and reduce if possible, these diseases. In some instances at least the necessary knowledge is available if we can only succeed in making it effective in the day-to-day operations of agriculture. We hope that as time goes on we shall, in co-operation with the Colleges at Guelph, do more to remedy some of these conditions.

Chemical Engineering.—Towards the end of 1928, Mr. Stuart, an officer of the Department of the Interior, Ottawa, and Mr. Barnes of the Ontario Hydro-Electric Power Commission, brought before the Foundation memoranda regarding the production of hydrogen and oxygen by electrolysis, and the possible methods of utilizing these gases in different branches of industry. It was suggested that the Province of Ontario and the Province of Quebec, possessing as they do vast resources of water power available for the development of electricity, are in a particularly favourable position for the production of cheap hydrogen and oxygen. The question was raised also as to whether or not the large blocks of off-peak power available at different times and in different places do not themselves create a favourable situation for the preparation and use of these gases. The Foundation appointed at this time an advisory committee which met at regular intervals to discuss these and other related questions. More recently the material available has been placed in the hands of Dr. A. E. R. Westman, who has joined the staff of the Foundation. As a result of the work of this committee and the members of the staff, we now have valuable and interesting material which will form the basis of a report which will be available for those who are interested in this important question. The significance of the problem can only be fully understood when one is aware of the rapidly increasing uses in industry for these two gases. Also it is important that the Foundation should be constantly rechecking the figures which we now have with regard to the cost of production in order that we may at any given time state with some degree of authority whether or not it is economically feasible to produce and use hydrogen and oxygen for a particular purpose. The cost of hydrogen is a most important element in the final cost of synthetic ammonia, one of the most important artificial fertilizers, and the work which the Foundation has been able to accomplish in this field during the last year will be of great value to any group who may contemplate the erection of a fertilizer plant within this Province. Dr. Westman has also devoted a considerable amount of time to a careful study of the problem as to the cost figure for oxygen which would make it a possible alternative in the production of water-gas.

Working in collaboration with the Department of Mines, a preliminary estimate has been made of the radium content of ore and concentrates obtained from a property within the Province. If the figures obtained are sufficiently encouraging an attempt will be made to determine more accurately the extent of the deposit and its average composition.

During the past year the officers of the Department of Mines have surveyed and drilled a lignite deposit in the neighbourhood of Blacksmith's Rapids on the River Abitibi, in Northern Ontario. Arrangements have been made for a large sample of the material to be brought down and this will shortly be available for laboratory and semi-commercial investigations.

Fellowships.—During the present academic year the Foundation has had the privilege of rendering financial support to important pieces of research in progress in the University of Toronto. Mr. Skey is working in the Department of Economics on various questions relating to the marketing of agricultural products and Miss Forward, in the Department of Botany, on the physiology of wheat rust. A number of students in the Department of Economics in McMaster University are working, under the general direction of Professor Michell, on an investigation of the statistics relating to the Workmen's Compensation Act. We have also been able to assist in this research.

Faithfully yours,

H. B. Speakman,
Director.

Appendix A

ONTARIO

Executive Council Office

Copy of an Order-in-Council approved by The Honourable the Lieutenant-Governor, dated the 14th day of May, A.D. 1929.

Upon recommendation of the Honourable the Prime Minister, the Committee of Council advise that under the provisions of the Research Foundation Act, 1928, as amended by the Research Foundation Act, 1929, Your Honour may be pleased to designate as members of the Ontario Research Foundation such persons as have, or may hereafter, become subscribers to the Foundation.

The Committee further advise that Sir Joseph Flavelle, Bart., of Toronto, be appointed Chairman of the Foundation, and J. Stanley McLean, Esquire, of Toronto, be appointed Vice-Chairman.

And the Committee further advise that the following members of the Foundation constitute an Advisory Board to act with the Chairman, Vice-Chairman and executive officers of the Foundation:

W. J. Bell, Esq., B.S.A.	Principal, Kemptville Agricultural School, Kemptville, Ont.
J. P. Bickell, Esq	President, McIntrye-Porcupine Mines, Ltd., Standard Bank Bldg., Toronto.
J. H. Black, Esq	Vice-President, Spruce Falls Power and Paper Co., 330 Bay St., Toronto.
N. E. Bolton, Esq	Research Department, T. Eaton Co., Ltd., Toronto.
Thomas Bradshaw, Esq	Vice-President and General Manager, Massey-Harris Co., Ltd., 915 King St. West, Toronto.
H. H. Champ, Esq	Treasurer, The Steel Company of Canada, Ltd., Hamilton, Ont.
G. I. Christie, Esq., B.S.A., D.Sc.	President, Ontario Agricultural College, Guelph, Ont.
A. L. Clark, Esq., B.Sc., Ph.D.	Dean, Faculty of Applied Science, Queen's University, Kingston, Ont.
Elmer Davis, Esq	Vice-President, A. Davis & Son, Ltd., Kingston, Ont.
R. C. Dearle, Esq., M.A., Ph.D.	Professor of Physics, University of Western Ontario, London, Ont.
W. A. Dryden, Esq	Stockbreeder, Maple Shade Farm, Brooklin, Ont.
Kenneth J. Dunstan, Esq	Vice-President, The Bell Telephone Co., of Canada, 76 Adelaide St. W., Toronto.

J. G. FitzGerald, Esq., M.D.	Director, School of Hygiene and Connaught Laboratories, University of Toronto.
E. Holt Gurney, Esq	President, Gurney Foundry Co., Ltd., 500 King St. W., Toronto.
R. M. Jenkins, Esq., V.S.	Manager, Don-Alda Farm, Donlands, Ont.
Louis Lang, Esq	President, Lang Tanning Co., Ltd., Kitchener, Ont.
G. C. McEwen, Esq	Vice-President and Works Manager, Imperial Varnish & Colour Co., Ltd., 60 Morse Ave., Toronto.
Robert McEwen, Esq	Stockbreeder, Alloway Lodge Stock Farm, Byron, Ont.
George McLaughlin, Esq.	Box 235, Oshawa, Ont.
J. C. McLennan, Esq., O.B.E., Ph.D., F.R.S.	Professor of Physics, University of Toronto.
Humfrey Michell, Esq., M.A.	Professor of Political Economy, McMaster University, Toronto.
Robert Miller, Esq	Stockbreeder, Stouffville, Ont.
W. Lash Miller, Esq., B.A., Ph.D.	Professor of Physical Chemistry, University of Toronto.
Paul J. Myler, Esq	President, Canadian Westinghouse Co., Ltd., Hamilton, Ont.
T. A. Russell, Esq	President, Willys-Overland Co., Ltd., 1209 King St. W., Toronto.

ADVISORY RESEARCH COMMITTEES

Canada Packers, Ltd., Research Committee.

H. E. Corman, B.A.Sc.	Chief Chemist, Harris Abattoir Co., Ltd., Toronto.
E. C. Fox, B.A.	Vice-President in charge of production, Canada Packers, Ltd.
W. S. McLeod, B.Sc.	General Supt., Canada Packers, Ltd., Toronto.
R. W. Perry, Ph.B.	General Manager, Gunns, Ltd., and Director, Canada Packers, Ltd.
R. W. Rowat, M.A.	Chief Chemist, Wm. Davies Co., Ltd., Toronto.
R. S. Thurlow	Supt., Wm. Davies Co., Ltd., Toronto.

Canadian Woollen & Knit Goods Manufacturers' Association, Research Committee.

A. Burton	Sec.-Treas. and Manager, Middlesex Mills, London, Ont.
D. C. Dick	President, Textile & Dyers Corporation, Ltd, Cobourg, Ont.; President, Canadian Woollen & Knit Goods Mnfgs. Assn.

D. H. Gibson	Vice-President, Robert Simpson Co., Ltd., Toronto.
Douglas Hallam	Secretary, Canadian Woollen & Knit Goods Mnfgs. Assn.
J. D. Woods	Manager, York Knitting Mills, Toronto.
F. A. J. Zeidler	President and General Manager, Dickinson Dye Works, Toronto.

Contagious Abortion in Cattle—Committee of Enquiry.

Chairman:	
T. A. Russell, B.A	President, Willys-Overland, Ltd., Toronto.
Vice-Chairman:	
Geo. W. McLaughlin	Stockbreeder, Oshawa, Ont.
Secretary:	
Ronald Gwatkin, D.V.Sc.	Fellow in Veterinary Research, Ontario Research, Foundation; Bacteriologist, Ontario Veterinary College, Guelph.
F. G. Banting, M.C., M.D., LL.D	Professor of Medical Research, University of Toronto.
W. A. Dryden	Stockbreeder, Maple Shade Farm, Brooklin, Ont.
J. G. FitzGerald, M.D., LL.D.	Director, School of Hygiene, University of Toronto.
Seymour Hadwen, D.V.Sci.	Director of Veterinary Research, Ontario Research Foundation.
Oskar Klotz, M.B., M.D., C.M.	Professor of Pathology and Bacteriology, University of Toronto.
C. D. McGilvray, V.S., M.D.V., D.V.Sc	Principal, Ontario Veterinary College.
E. A. Watson, V.S	Chief Animal Pathologist, Health of Animals Branch, Ottawa.

Hydrogen and Oxygen Research Committee.

J. Watson Bain, B.A.Sc.	Professor of Chemical Engineering, University of Toronto.
A. S. L. Barnes, A.M.I.E.E.	Hydro-Electric Power Commission Laboratory.
W. P. Dobson, M.A.Sc.	Hydro-Electric Power Commission Laboratory.
T. R. Loudon, B.A.Sc.	Professor of Applied Mechanics, University of Toronto.
C. H. Mitchell, C.B., C.M.G., D.S.O.	Dean, Faculty of Applied Science, University of Toronto.
J. H. Parkin, B.A.Sc.	Professor of Mechanical Engineering, University of Toronto.
Wilfred Philpot	Consumers' Gas Company, Toronto.
C. E. Schwenger, B.A.Sc.	Toronto Hydro-Electric System.
A. T. Stuart, B.A.	Hydro-Electric Power Commission Laboratory; Dominion Water Power Service, Dept. of Interior, Ottawa.
E. J. Tucker	Consumers' Gas Company, Toronto.

Appendix B

ONTARIO RESEARCH FOUNDATION—STAFF
NOVEMBER 1ST, 1929

Director: H. B. SPEAKMAN, D.Sc. (Manc.)
Secretary: RALPH SKELTON, B.Sc. (McGill).

Director of Metallurgical Research: O. W. ELLIS, M.Sc. (Birm.)
1914-1921—Chief Metallurgist, Royal Ordinance Factories, Woolwich.
1921-1925—Asst. Professor of Metallurgical Engineering, University of Toronto.
1925-1926—Research Fellow, The Mellon Institute of Industrial Research of the University of Pittsburgh.
1926-1929—Research Metallurgist, Westinghouse Electric & Manufacturing Company, E. Pittsburgh.

Fellow in Metallurgical Research: J. R. GORDON, B.Sc. (Queen's).
1920-1929—Industrial research work with the Deloro Smelting & Refining Company at Queen's and at Welland, Ont.

Director Chemical Engineering: A. E. R. WESTMAN, B.A., M.A., Ph.D. (Tor.)
1924-1928—Research Associate in Ceramics, Engineering Experiment Station, University of Illinois, Urbana, Ill.
1928-1929—Associate Professor of Ceramics, Rutgers University, New Brunswick, N.J.

Fellow in Chemical Engineering: S. E. MCDOWELL, A.B. (McMaster), S.M. (Chicago) 1929.

Director of Veterinary Research: SEYMOUR HADWEN D.V.Sci. (McGill).
1904-1905—Veterinary Inspector, Dominion Dept. of Agriculture, West Kootenay, B.C.
1905-1906—In charge of Research work on horses at the research station, Lethbridge, Alta.
1906-1908—Assistant at the Biological Laboratory, Ottawa.
1908-1909—Studies and research work at Liverpool and Cambridge Universities.
1909-1913—Pathologist in charge of research laboratory at Agassiz, B.C.
1917-1920—Chief Animal Pathologist for Canada at Ottawa.
1920-1922—Chief Veterinarian and Parasitologist in charge of Reindeer Investigations in Alaksa for American Government.
1923-1929—Research Professor of Animal Diseases, University of Saskatchewan.

Fellow in Veterinary Research: RONALD GWATKIN, V.S., B.V.Sc., D.V.Sc.
1919 —Health of Animals Branch, Inspection Service.
1919-1929—Lecturer, Ontario Veterinary College.

Fellow in Veterinary Research: J. C. BROWN, V.S., B.V.Sc.
1915-1919—Veterinary Officer with Imperial Remount Commission.
1919-1929—General practice in Markham, Ont.

Canada Packers Research Laboratory, Fellow: A. D. BARBOUR, B.A.Sc., M.A., Ph.D. (Tor.)
1924-1925—School of Engineering Research, University of Toronto.
1925-1927—Chemist, Insulin Committee Laboratory, Univers. of Toronto.
1927-1928—Research Fellow, Dept. of Biochemistry, Univers. of Toronto.

Canadian Woollen Association Research Laboratory, Fellow: C. W. EWING, B.A.Sc., (Tor.)
1923-1928—Consulting Chemist in private practice and in charge of Textile Laboratory, Canadian Woollen and Knit Goods Manufacturers' Association.

Physical Research, Fellow: RALPH HAWKINS, B.A. (Tor.)
1929 —Dominion Observatory, Ottawa.

Appendix C

An Act to establish a Research Foundation in Ontario

Chapter 57, 18 George V.

HIS MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:—

Short title.

1. This Act may be cited as *The Research Foundation Act, 1928.*

Establishment of Foundation.

2. There shall be established a corporation to be known as the Ontario Research Foundation, hereinafter called the "Foundation," which shall consist of such persons as may from time to time be designated by the Lieutenant-Governor in Council to be members of the Foundation.

Objects of Foundation.

3. The objects of the Foundation shall be the carrying on of research work and investigations having for their purposes,—

(*a*) the improvement and development of manufacturing and other industries by the introduction of advanced methods and processes;

(*b*) the discovery and better development of the natural resources of the Province and the discovery and utilization of the by-products of any processes in treating or otherwise dealing with the mineral, timber and other resources of the Province;

(*c*) the development and improvement of methods in the agricultural industry and the betterment, welfare and progress of farm life;

(*d*) scientific research and investigation for the mitigation and abolition of disease in animal or vegetable life and the destruction of insect or parasitic pests;

(*e*) generally the carrying out, with the approval or under the direction of the Lieutenant-Governor in Council, of any other research work or investigation which may be deemed expedient.

Applications for investigation of problems.

4. Subject to any general regulations in that behalf which may be made by the Lieutenant-Governor in Council, the Foundation may receive applications from any person or from any group of persons for the investigation and solution by the Foundation of any problems which present themselves in any manufacturing, mining, labouring or other industrial process, upon such terms as to the payment of the expenses of any such work as may be agreed upon in accordance with the regulations.

Chairman and vice-chairman.

5.—(1) The Lieutenant-Governor in Council may appoint one of the members to be the chairman of the Foundation and another member to be vice-chairman.

Powers of chairman.

(2) The chairman shall preside at all meetings of the Foundation and shall have the control and direction of the administration of the Foundation and of the members and staff of the Foundation.

Powers of vice-chairman.

(3) In the absence of the chairman, or at his request, the vice-chairman shall preside at the meetings of the Foundation and shall have and may exercise the powers of the chairman.

Subscribers to Foundation,

6.—(1) The Foundation may enter into an agreement in writing with such persons as may desire to become subscribers to the Foundation for receiving from such persons subscriptions of money in sums of $100, or multiples thereof, until the sum of $1,000,000 has been subscribed.

Report of work to be furnished to subscribers.

(2) The subscribers to the Foundation shall be entitled to receive, from time to time, reports of the work carried on by the Foundation and to make suggestions from time to time as to the nature of the research work and investigations to be pursued by the Foundation and the methods to be used therein.

Time for payment of subscriptions.

(3) Twenty per centum of the subscriptions shall be paid at the time of subscribing and twenty per centum in each of the four years next following the subscription, upon a day to be named by the Foundation.

Payment up of subscriptions and contributions by Government,

Amounts to be subscribed by Province.

7. So soon as the chairman shall certify in writing to the Lieutenant-Governor in Council that the sum of $1,000,000 has been subscribed and the sum of $200,000 has been paid thereon, the Treasurer of Ontario may pay to the Foundation the sum of $200,000 out of any moneys appropriated by the Legislature for that purpose and thereafter, in each of the four following years, when the chairman shall certify that the sum of $200,000 has been paid the Treasurer of Ontario may pay an equivalent sum to the Foundation.

Power to expropriate land and erect buildings.

8. The Foundation may acquire by purchase or lease, or may enter upon, take and use without the consent of the owner thereof, any land and buildings which may be deemed suitable for the purposes of the Foundation and may erect buildings, acquire and instal machinery and equipment and purchase all such instruments, materials and appliances and other matters and things as may be deemed necessary, provided that such lands and buildings so purchased, leased or taken, and the plants and other buildings to be erected by the Foundation shall be first approved by the Lieutenant-Governor in Council.

Meetings.

9. The Foundation shall hold meetings from time to time for the purpose of informing the subscribers and the public of the work being

Annual report.

carried on by the Foundation and as to any new development, industrial, agricultural or scientific research in which the Foundation may be interested and shall make an annual report of its proceedings, including a statement of the receipts and expenditures of the Foundation in such form as the Lieutenant-Governor in Council may require and such report shall be laid before the Legislative Assembly at its first meeting thereafter.

Application of Rev. Stat. c. 52.

10. Whenever the Foundation exercises the power to enter upon, take or use lands without the consent of the owner thereof, *The Public Works Act* shall apply *mutatis mutandis* and the procedure shall be, as nearly as may be, that provided in *The Public Works Act* where land is taken for the use of the Province.

Regulations.

11. The Lieutenant-Governor in Council may make regulations for the better carrying out of the provisions of this Act and the powers and duties of the Foundation as herein set out shall be exercised subject to such regulations.

Commencement of Act.

12. This Act shall come into force on the day upon which it receives the Royal Assent.

Appendix C

An Act to amend The Research Foundation Act, 1928

Chapter 86, 19 George V.

HIS MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:—

1. The Act may be cited as *The Research Foundation Act, 1929*. Short title.

2.—(1) Subsection 2 of section 5 of *The Research Foundation Act, 1928*, is amended by striking out the words "members and" in the third line, so that the subsection will now read as follows: 1928, c. 57, s. 5, subs. 2, amended.

> (2) The chairman shall preside at all meetings of the Foundation and shall have the control and direction of the administration of the Foundation and of the staff of the Foundation. Powers of chairman.

(2) The said section 5 is amended by adding thereto the following subsection: 1928, c. 57, s. 5, amended.

> (4) The Lieutenant-Governor in Council may appoint from among the members of the Foundation not more than twenty-five persons to constitute an advisory board to act with the chairman, vice-chairman and executive officers of the Foundation. Advisory board appointment of.

3. Subsection 1 of section 6 of *The Research Foundation Act, 1928*, is amended by striking out the figures "$1,000,000" in the last line and inserting in lieu thereof the figures "$2,500,000," so that the subsection will now read as follows: 1928, c. 57, s. 6, subs. 1, amended.

> (1) The Foundation may enter into an agreement in writing with such persons as may desire to become subscribers to the Foundation for receiving from such persons subscriptions of money in sums of $100, or multiples thereof, until the sum of $2,500,000 has been subscribed. Subscribers to Foundation.

4. Section 7 of *The Research Foundation Act, 1928*, is amended by inserting after the figures "$1,000,000" in the second line the words "or upwards," and by striking out all the words in the said section after the word "thereafter" in the sixth line and inserting in lieu thereof the words "at the close of each fiscal year the Treasurer of Ontario may pay to the Foundation a sum equivalent to the amount subscribed and paid in by individuals and corporations to the Foundation during that year as certified by the chairman," so that the section will now read as follows: 1928, c. 57, s. 7, amended.

Payment up of subscriptions and contributions by Government.

7. So soon as the chairman shall certify in writing to the Lieutenant-Governor in Council that the sum of $1,000,000 or upwards has been subscribed and the sum of $200,000 has been paid thereon, the Treasurer of Ontario may pay to the Foundation the sum of $200,000 out of any moneys appropriated by the Legislature for that purpose and thereafter at the close of each fiscal year the Treasurer of Ontario may pay to the Foundation a sum equivalent to the amount subscribed by individuals and corporations to the Foundation during that year as certified by the chairman.

1928, c. 57, amended.

5. *The Research Foundation Act, 1928,* is amended by adding thereto the following sections:

Right to acquire patents, etc.

10*a*. The Foundation may apply for, or acquire by purchase, assignment or otherwise, rights in any patent of invention for industrial or other processes of any nature or kind whatsoever, and may sell and dispose of the same, or any interest therein, and grant or assign any rights which may be, acquired by the Foundation thereunder.

Property not liable to assessment.

10*b*. The real and personal property, business and income of the Foundation shall not be subject to assessment or taxation for municipal or provincial purposes.

Commencement of Act.

6. This Act shall come into force on the day upon which it receives the Royal Assent.

ONTARIO RESEARCH FOUNDATION

INCOME AND EXPENDITURE

FROM JUNE 11TH, 1928, TO DECEMBER 31ST, 1929

EXPENDITURE

Salaries:		
Laboratory Salaries—Heads and Assistants	$25,124 02	
Salaries of Director, Secretary-Treasurer, Stenographers, Librarian, Caretaking, etc	15,847 09	
		$40,971 11
Direct Charges to Researches:		
Chemicals and other Supplies	3,160 78	
Travelling and Sundry Expenses	5,411 90	
Special Grants to Universities for Researches	853 15	
		9,425 83
Sundry General Expense		9,516 37
TOTAL EXPENDITURE OTHER THAN DEPRECIATION		59,913 31
Depreciation Provided on Fixed Assets		3,449 53
TOTAL EXPENDITURE INCLUDING DEPRECIATION		$63,362 84
		$63,362 84

INCOME

Interest on Bonds and Debentures:		
Received	$23,738 57	
Accrued	9,968 05	
		$33,706 62
Other Interest:		
Bank	$3,880 12	
Sundry	9,250 92	
		13,131 04
Received from Industrial Corporations for Researches		12,050 00
Discounts taken		112 31
TOTAL INCOME RECEIVED AND ACCRUED		$58,999 97
Income Deficit, being excess of Expenditure over Income after providing for Depreciation on Fixed Assets		4,362 87
		$63,362 84

OPERATING COSTS OF RESEARCHES TO DECEMBER 31ST, 1929

Canada Packers, Limited	$7,669 49
Canadian Woollen and Knit Goods Manufacturers Association	6,500 81
Metallurgical Division	12,720 71
Chemical Division	4,381 00
Sulphur Research	1,878 00
Hydrogen and Oxygen	1,195 13
Agriculture, Contagious Abortion and Veterinary Division	6,666 71
	$41,011 85

BALANCE SHEET

As at December 31st, 1929

Assets

Cash in Bank and on Hand:			
Trust Bank Account		$155,467 23	
Operating Bank Account		7,810 95	
Petty Cash		63 00	
Total Cash			163,341 18
Investments:			
Canadian Trustee Securities	$845,079 68		
Foreign Government Bonds	136,636 39		
Canadian Public Utility and Railway Bonds	101,688 29		
		$1,083,404 36	
Accrued Interest thereon to December 31st, 1929		9,968 05	
			1,093,372 41
Accounts Receivable:			
Province of Ontario—for Disbursements to date on new Laboratory Building and alterations, 47 Queen's Park and St. Joseph Street—including Apparatus, Instruments, Furniture and Fixtures (to be paid on completion of Building)		181,768 31	
Sundry Accounts Receivable		850 00	
			182,618 31
Stores and Containers			2,052 07
Library			3,730 04
Advances			25 00
			$1,445,139 01

Liabilities, Reserves and Surplus

Accounts Payable			$192 35
Reserves for Depreciation on Fixed Assets			3,449 53
Total Subscriptions		$3,742,920 00	
Less Subscriptions Unpaid:			
Not Due	$2,275,810 00		
Due	21,250 00		
		2,297,060 00	
		$1,445,860 00	
Less Income Deficit		4,362 87	
			1,441,497 13
			$1,445,139 01

I have audited the books and accounts of Ontario Research Foundation from its inception to December 31st, 1929, and I have received all the information and explanations that I have required and I hereby certify that the above Balance Sheet is, in my opinion, a true and correct view of the affairs of Ontario Research Foundation according to the information and explanations given me and as shown by the books of account.

Elliott Allen, C.A.,
January 28th, 1930.
Of Allen and Miles,
Chartered Accountants.

255146
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Ont Sessional papers.
L Vol.62, pt.5 (1930)

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